



A PLANET HOLLYWOOD BECOMES A VICTORIAN OBSERVATORY IN ORLANDO'S DISNEY SPRINGS

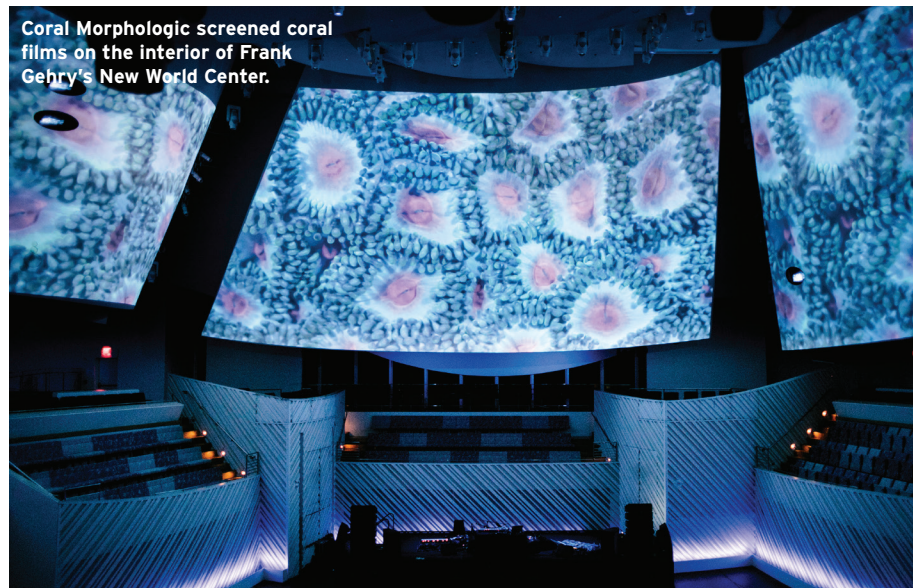
STAR STRUCK

When it comes to theatrical architecture, Disney rarely disappoints. So when it came time to remodel the spherical Planet Hollywood in the Disney Springs

Development, it turned to Boston-based Elkus Manfredi Architects to double down on the theme "Dine Amongst the Stars." Disney Springs is located

near Disney's collection of theme parks in Orlando, Florida. The recently expanded district is home to retail, dining, and entertainment, all modeled after a centuries-old American town that evolved along an alternate timeline to our own. The remodeled Planet Hollywood was

continued on page 11



A SCIENCE LAB AND ART STUDIO CAPTURES MIAMI'S ORIGINAL ARCHITECTS: CORALS

Reefer Madness

"Corals are the first architects on planet earth and the only organism besides humans

to create things you can see from space," said Colin Foord, marine biologist

and cofounder of Coral Morphologic, a multimedia aquaculture studio and science lab out of Miami that is as focused on studying and growing corals as it is capturing and sharing their unique relationship to the city.

continued on page 11

A BAUHAUS OUTPOST IN SOUTHERN FLORIDA CLOSER TO REALIZATION

FLA-HAUS

Florida International University (FIU) and the Bauhaus Dessau Foundation recently confirmed that they are creating a formal academic relationship for architecture, design, and arts students. This is the first time the Bauhaus Dessau Foundation has formed an official partnership with a U.S. university.

Over the next couple of years, there are plans to host an ideas competition for the design and construction of a 21st-century Bauhaus "Master House" in Miami. FIU will announce the winner of the competition at the 2019 Bauhaus Centennial celebration.

Bauhaus Dessau hosts students, researchers, and resident artists at its campus and contains the second-largest archive of Bauhaus

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HOW WE CONSUME IS CHANGING, AND FLORIDA'S LARGEST RETAIL DEVELOPMENTS ARE ADJUSTING TO KEEP UP

SHOPPING RE-CENTER

When Victor Gruen designed the first contemporary American malls in the mid-1950s, he changed the way Americans shopped. Much to his chagrin, however, what malls would become

over the next 50 years would be far from the civic social suburban spaces that he had envisioned. He would eventually distance himself from the typology.

Today, malls, as a

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THE AIA MEETS IN ORLANDO THIS YEAR, SO WE TAKE A CLOSE LOOK AT THE ARCHITECTURE AND URBANISM OF SOUTH FLORIDA. PAGE 23



FACADES SPECIAL ISSUE

INTERACTIVE AND BIO-TECHNOLOGIES ARE TRANSFORMING FACADE PERFORMANCE AS ASSEMBLY SYSTEMS ARE DESIGNED TO REACT TO THEIR SURROUNDINGS AND MIMIC NATURE. WE LOOK AT SOME OF THE LATEST RESEARCH AND APPLICATIONS, AS WELL AS INNOVATIVE FACADES USING A RANGE OF MATERIALS IN NEW, UNEXPECTED WAYS. PAGE 33

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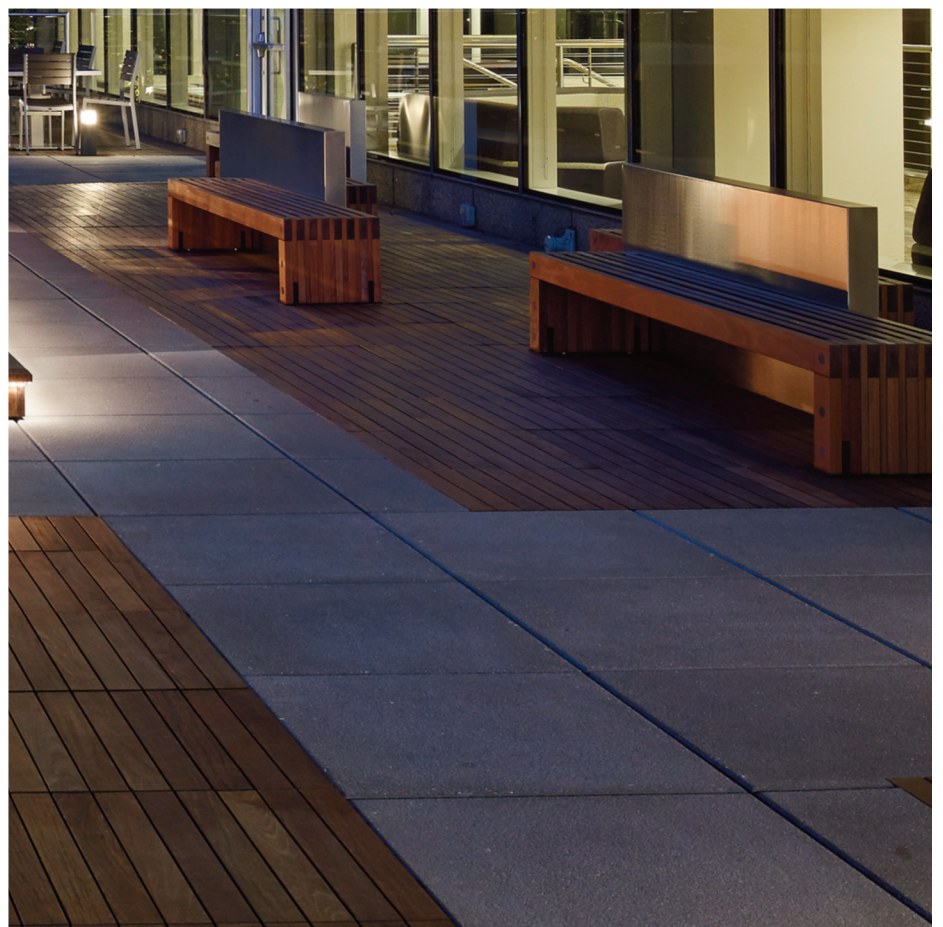
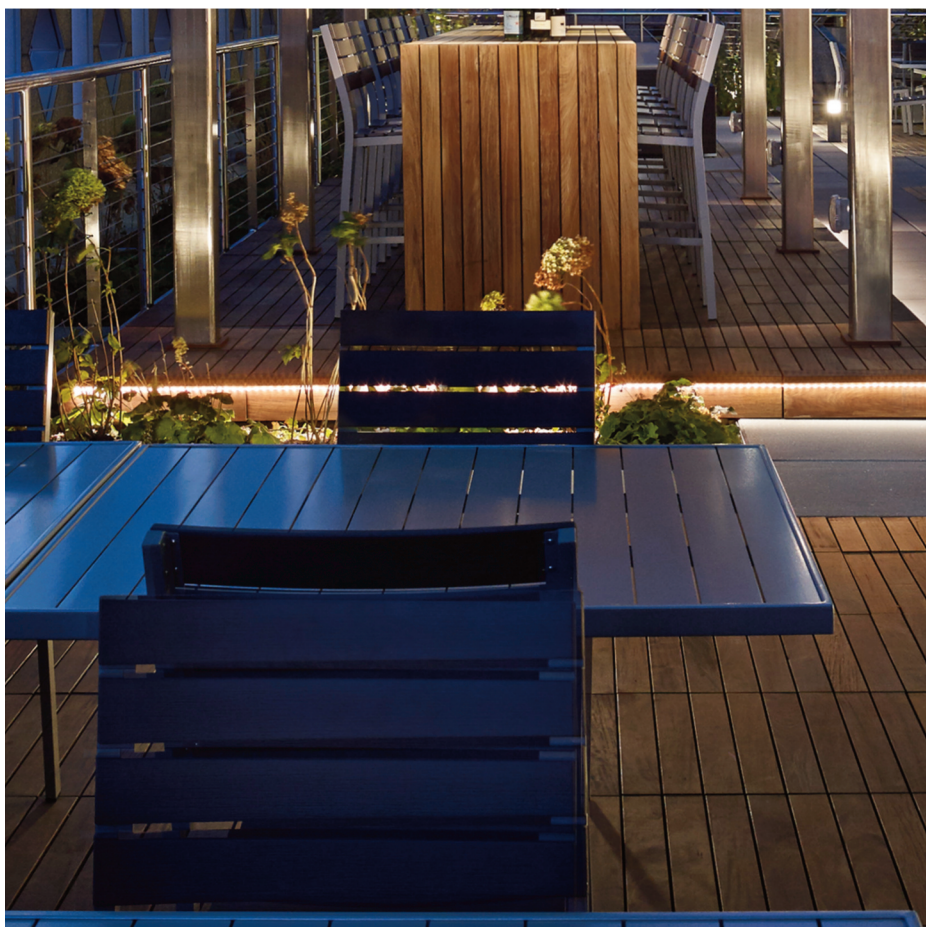
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WHY FLORIDA?

Since *The Architect's Newspaper* switched from four weekly regional editions to one single national monthly, we have worked tirelessly to maintain our in-depth regional coverage of architecture, even if it is packaged differently. But sometimes we miss the intense focus on one region for one issue. That is why for our AIA special issue, which coincides with the AIA National Convention (page 77) in Orlando, Florida, we decided to make a Florida regional issue, in the spirit of our old East, Midwest, West, and Southwest editions. We could call it Southeast, but there is so much building and development going on in Florida that we wanted to give it the classic *AN* treatment by itself.

What exactly is happening there?

Most of the high-profile development is in Miami, where The Four Seasons stands as the tallest building in the city at 789 feet, but will soon be surpassed by the 830-foot-tall Panorama Tower, and soon after that both will likely be passed by a wave of supertalls that are in the planning process. There are nearly a dozen proposals in various states of planning, including World Trade Center of the Americas, The Towers by Foster + Partners (page 26), KPF's One Bayfront Plaza, and Skyrise Miami, a.k.a. "The Eiffel Tower of the Magic City" (below). The FAA has never approved a building over 1,049 feet, so that is the designated height of many, including the latter three listed above.

This boom shows that while the condo market in South Florida may actually be cooling off, the cities are not. In our feature, we profile Miami from several angles, showing a complex metropolis layered with architecture and design activity. The latest wave of development has brought with it a new civic-mindedness to a city that is struggling to escape its car-centric culture and is slowly growing to offer more urbane experiences through infrastructure, density, and advances in technology. The re-urbanization of Miami parallels many other places, but it has its own characteristic development patterns (page 23).

The paradox of building directly in the face of sea-level rise may seem daunting, especially as the governor of Florida continues to deny climate change and forbids government employees from using the term. Luckily, there is hope: A sub-state organization of counties and municipalities are taking the lead without state help. Since 2009, the counties of Broward, Miami-Dade, Monroe, and Palm Beach have led the Southeast Florida Regional Climate Change Compact. Other partners include the Institute for Sustainable Communities, South Florida Water Management District, The Nature Conservancy – Florida Chapter, and the Florida Climate Institute. Along with a collection of cities and towns, they have been working together—and meeting annually—to coordinate mitigation and adaptation activities across county lines, as well as address funding and policy issues.

In Miami, there is also work being done to combat the social issues of sea-level rise threatening the city, as there is real concern that up to 50 percent of the land will not be habitable in the coming decades. What will happen if this is true? Not only would real estate become unusable, but higher ground that is now affordable could become unaffordable for those who live there, if that territory becomes more desirable to those displaced along the shore. To offset that, many are looking to Philadelphia's anti-gentrification "Development Without Displacement" methods such as the tax exemptions in the Longtime Owner-Occupant Program (LOOP), and other alternative ownership incentives and models, and applying them to a GIS-based plan for the city.

These contradictory forces—the ocean and the city—may pose a threat to Miami if no action is taken, but they are also what makes it so desirable. The landscape and the resultant tourism industry—hotels, malls, resorts, beaches, nightlife—fuels a tropical paradise with urban, suburban, and rural issues as compelling and complex as anywhere.

Because we cover Florida regularly, we have some past coverage that might interest those who enjoy this issue. See page 6 for a list of past articles and info on how to find them online.

Special thanks to landscape architect Walter Meyer of Local Office Landscape architecture whose help was indispensable for this issue.

MATT SHAW

IS JACKSONVILLE FLORIDA'S BEST HOPE FOR A POST-CLIMATE CHANGE MEGACITY?



WIKIMEDIA COMMONS

FUTURE-VILLE

Increasing economic and environmental pressures have the potential to challenge the resiliency of South Florida's low-lying urban areas in the near future. As Florida's population continues to grow in the midst of the increasingly obvious impacts of gentrification, global climate change, and sea level rise, economic and environmental displacement are likely to make the northern city of Jacksonville a beacon of hope for a climate-ravaged state.

Why? Because Jacksonville is huge and has room to grow. The city, named after President Andrew Jackson, also first governor of Florida, is the state's largest by population and the 12th largest in the U.S., population-wise, with 868,031 residents. Jacksonville is also the largest city in the U.S. by land area—874.3 square miles—making it almost twice the size of Los Angeles and about three times that of New York City. The city's corresponding 1,142 people per square mile density—L.A. and New York are many times denser—means there is plenty of room to grow.

Ruth L. Steiner, professor and director at the Center for Health and the Built Environment in the department of Urban and Regional Planning at the University of Florida, Gainesville, said: "I think the area is amenable to accepting large amounts of new growth," adding that though the region could likely support an influx of new residents, its schools, transportation, and land-use policies would need a healthy dose of re-thinking to be ready.

A question regarding the massive growth in southern and central Florida, however, centers around the long-term sustainability of these new population

continued on page 14



SkyRise Miami might become the city's tallest tower.

ARQUITECTONICA GOES OVER THE TOP, EVEN BY MIAMI'S STANDARDS

TOWER OF FUN

Leave it to Miami to build a 1,000-foot-tall tower and top it with an exclusive club. The SkyRise Miami observation tower is proposed to sit at Bayside Marketplace Downtown. Along with its Sky Top club and premium observation deck, some 900 feet above the waterfront, the tower will also include at least three other indoor and outdoor observation decks, and three

theme park-like rides: the SkyRise Flying Theater, the bungee jump-like Sky Plunge, and the free-falling SkyDrop. The base of the tower will include entertainment, retail, and restaurant space. The tower is projected to be LEED Gold-certified, and is being touted for its ability to withstand wind speeds of up to 186 miles per hour. Currently the tallest building in Miami is just under 800 feet tall. If built, the SkyRise Miami may take that title, though there are a handful of skyscrapers proposed and under construction that will be vying for the top spot. **MATTHEW MESSNER**

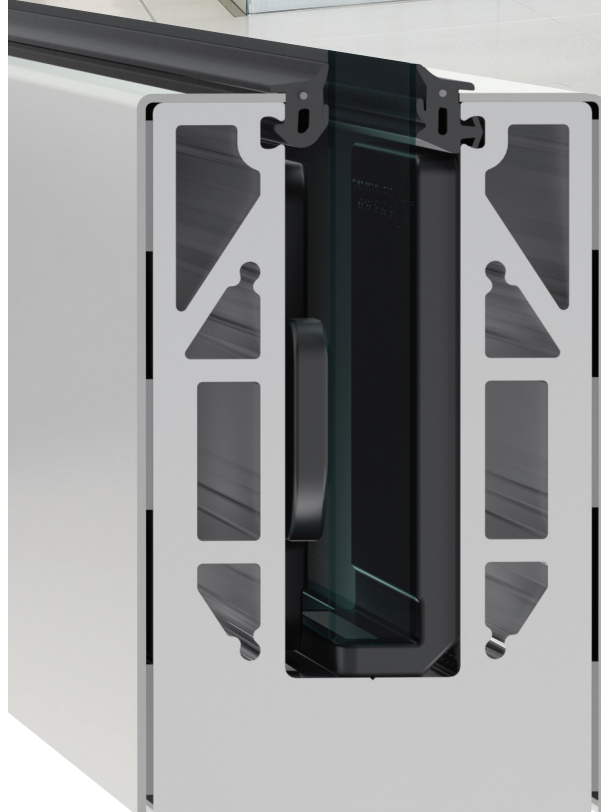


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> **BAZAAR MAR**
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Chef José Andrés, James Beard Award winner and pioneer of molecular gastronomy, will lead the culinary team of Bazaar Mar, a new 7,200-square-foot restaurant just south of the Miami River in Arquitectonica's newly built SLS Brickell tower. Designer Philippe Starck crafted a nautical dream world complete with mythical sea beasts, picturesque coastal vignettes, and a characteristic white and navy color palette.

The main space is composed of two dining rooms and a raw bar materially connected with over 6,000 hand-painted tiles featuring the drawings of artist Sergio Mora and manufactured in Spain by Cerámica Artística San Ginés. The tiles completely cover the walls and ceiling, painted in a Delft Blue pastiche that is typical of 16th-century Dutch pottery. The murals are ornamented with gilded crustaceans and cabaret-style mermaids that dissolve the otherwise solid walls into surrealist other worlds. Likenesses of people involved in the project appear throughout the murals including Chef Andrés. The furnishings are varied, including smooth marble-topped tables, upholstered love seats, and stark white wooden chairs, creating a visually heterogeneous atmosphere against which the maritime fantasy emerges.

The bright dining room is contrasted with a detached cocktail bar finished in black and gold tiles of the same stylized motif. The total effect of Starck's design fittingly underscores Andrés seafood-centric menu and draws from the aura of Miami's burgeoning art scene. **ANDREW DAVIS**

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> **UNDER MAGNITUDE**
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Architects: THEVERYMANY

A 48-by-35-by-26-foot public artwork has been installed in the main concourse of the Orange County Convention Center in Orlando, Florida. The work, titled *Under Magnitude*, is designed by New York architect Marc Fornes and his firm THEVERYMANY as a "curious signal and a place for visual wandering" meant to activate one of the convention center's main social spaces.

The two-story sculpture—made up of 4,672 ultrathin aluminum strips and 103,723 rivets—is suspended above the concourse floor via steel wires and can be seen at eye level from the mezzanine. The structure follows the laws of what Fornes described as "tangential continuities," a geometric phenomenon describing how micro-level linear components are utilized to describe macro-scaled, nonlinear geometries. The model dates back to the work of 20th century artist Otto Frei, whose Soap Bubble Model theory postulates the so-called "extensive curvatures" at the foundation of Fornes' work. Frei was interested in the geometric and structural tension that occurs in surfaces that transfer stresses along their length. Fornes inverts that theory via his notion of "intensive curvatures," in which digital modeling is used to "maximize double curvature across the project," rendering dynamic and fully self-supporting forms. The result is a holistic structural system that is defined by a tightly curved and constantly changing surface that is also incredibly strong and composed of thin materials.

The project, developed using Rhino digital-modeling software, opened in March 2017. In a video, Fornes said: "Some people start to project their own background onto it. If you come from the sea, some people will read coral. Some people will read flowers. It doesn't matter [how the viewer interprets the form], but it matters that they engage and that they start to wonder about the structure." **ANTONIO PACHECO**

MORE ON ARCHPAPER.COM

At *The Architect's Newspaper*, we strive to cover all four corners of America, and Florida is no exception. While this issue takes a fresh look at architecture, development, urbanism, and the environment throughout Miami and the Sunshine State, we've included some of our essential Florida coverage from 2016 below. Check it out online at archpaper.com by searching #FloridaIssue2017.

City of Miami to borrow \$45 million to preserve Miami Marine Stadium

From affordable housing to parks, inside the versatile Fort Lauderdale-based Glavovic Studio

An iconic Miami villa-turned-museum prepares for a major expansion to reclaim its former glory

Babylon Apartments in Miami, one of Arquitectonica's first designs, is at risk

From the Everglades to the Rockaways, this Brooklyn firm works with communities to design for resiliency

Miami's Frost Museum of Science by Grimshaw aims to be paragon of sustainable architecture

OMA-designed Faena Forum opens in Miami

Florida's Seminole tribe unveils guitar-shaped hotel as part of \$1.8 billion project in the Sunshine State

Machado Silvetti's modern addition to historically significant Ringling Estate

Populous unveils plans for Jacksonville Jaguars' amphitheater and flex field

THAT STUPID WALL

In a now-par-for-the-course Trumpian weaponization of identity politics, the president asked Related Group president Jorge “The Condo King” Pérez—of Argentinian descent—to help build the U.S.-Mexico border wall. The real estate tycoon, who is friends with Trump and has built a couple of buildings with him, said that he declined nicely and made a joke about which side he might end up on, according to *Bloomberg*. Pérez said later that “The wall is the most idiotic thing I’ve ever seen or heard in my life.”

ROTTERDAMMIT

In related Related Group news, *AN* is hearing that when OMA submitted its plans for the three-tower Park Grove condo complex in Miami’s Coconut Grove, the initial submission was hilariously below par. Because OMA had not done very much housing, the original RFQ contained some of Rem Koolhaas’s earliest conceptual housing schemes. When the designs for Park Grove were delivered to Related, they had no closets and the kitchens were too small. It took a collaboration with a local, condo-experienced architect to get them up to speed. It worked out, however, Park Grove is now over halfway done: Two Park Grove and the Club Residences recently topped off, and One Park Grove is expected to break ground in 2018.

SINKING OF YOU

In unrelated news, another developer in Miami said that there is an interstate conspiracy against South Florida architecture. “We would sell way more real estate here if the Real Estate Board of New York (REBNY) would stop telling everyone that Florida was sinking!” Sources have not confirmed whether either claim is true: the conspiracy or the sinking.

CHAINSAW MASSACRE

According to Miami’s new architecture website *Sean of Miami*, the pool at the luxury condo tower Icon Brickell has been having problems with its rooftop pool leaking. After a string of repairs the pools were still leaky and in order to fix the issue, construction workers were forced to cut down dozens of mature shade trees.

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UNVEILED

1212 LINCOLN ROAD

Perkins + Will have revealed renderings of their new mixed-use complex in Miami Beach, which will anchor one of Miami’s liveliest corners, Alton Road and Lincoln Road Mall. The new structure will house a boutique hotel, European-style food market, retail spaces, and a 450-car parking structure.

Lincoln Road is already home to many modern buildings, such as Frank Gehry’s New World Center and Herzog & de Meuron’s 1111 Lincoln Road, which is part of the appeal according to Jose Gelabert-Navia, lead designer on the project. “We love doing projects in Miami Beach, because the architecture is already modern, contemporary, and cutting edge,” he said.

1212 Lincoln Road aims to speak to that tradition and engage the area’s walkable nature, providing a grand exterior staircase for access to the market and a second



COURTESY PERKINS + WILL

floor balcony with views of the pedestrian mall.

1212 Lincoln Road is scheduled to begin construction in 2017.

LAUREN LLOYD

Architect: Perkins + Will
Client: Crescent Heights
Location: Miami, FL
Completion Date: 2018

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COURTESY ARTIS-NAPLES

WEISS/MANFREDI TAPPED TO MASTER PLAN NAPLES, FLORIDA'S CULTURAL CAMPUS

CAMPUS CULTURE

Naples, Florida-based arts organization Artis—Naples hired New York-based Weiss/Manfredi to create a master plan for its 99,000-square-foot Kimberly K. Querrey and Louis A. Simpson Cultural Campus. The plan will help the campus—home to the Naples Philharmonic, The Baker Museum (formerly the Naples Museum of Art), and a handful of other arts facilities—become more cohesive and dynamic, as well as embrace its natural surroundings.

“What we’re really focusing on are the spaces between the buildings,” said Weiss/Manfredi’s Michael Manfredi, who points out that much of the campus, even

though it is located less than a mile from the Gulf of Mexico, is covered in surface parking and self-contained structures. “The light, the water... to take that atmosphere and pull it into Artis—Naples is an extraordinary opportunity,” added fellow principal Marion Weiss. “They have an opportunity to have both a cultural and public dimension.”

The master plan, set to guide development on the campus for the next two to three decades, is scheduled to be ready by summer, with work getting underway next year. The designers are set to meet with Artis—Naples officials and the local community in the coming weeks.

“We’re still at the early

part of this exploration. But we know that when disciplines intersect something special happens,” said Artis—Naples CEO and President Kathleen van Bergen, hinting at closer connections among the institution’s varied cultural offerings. She added: “We want them to look at the entire property and consider everything. You don’t often get an opportunity like this in an organization’s life cycle.”

Currently that property, which hosts about 300,000 visitors per year, consists of five buildings, including two performance halls (Frances Pew Hayes Hall and Myra J. Daniels Pavilion), The Baker Museum, the Toni Stabile Education Building, and the Kohan Administration Building.

Best known for its Olympic Sculpture Park in Seattle, Weiss/Manfredi has also master planned the Nelson-Atkins Museum Cultural Arts District, and designed the Kent State Center for Architecture and Environmental Design. On this project, the firm beat out Diller Scofidio + Renfro with Hargreaves Associates, NADAAA with Michael Van Valkenburgh Associates, and PWP Land-scape Architecture with Allied Works Architecture.

SAM LUBELL

A JIMMY BUFFETT-THEMED COMMUNITY FOR ACTIVE ADULTS IS COMING TO DAYTONA BEACH

Wasting Away in Margaritaville

Thanks to a new Florida development, it will soon be possible to live 24/7 in Jimmy Buffett’s Margaritaville.

The almost one billion dollar Buffett-themed Daytona Beach complex is marketed toward the 55-plus crowd who crave those tropical vibes. At Latitude Margaritaville, residents will enjoy two resort-style pools, Margaritaville-branded cuisine at on-site restaurants, a fitness center, and a walkable town square complete with shuttle service to a one-acre private beach-front property. The 200,000 square feet of retail on-site will be anchored by a grocery store, and the community’s active adults (developer-speak for seniors) can work off those frosty tequila drinks on multiple pickleball courts. A band shell for live entertainment will round out the programming.

Though Buffet’s Margaritaville brand includes hospitality ventures in the U.S. and Caribbean, a retirement community is perhaps the perfect entrepreneurial synthesis of Buffett’s drunken yacht rock

and easy life ethos. Canada- and Florida-based developer Minto Communities is spearheading the project, which is located slightly inland, near the intersection of Interstate 95 and LPGA Boulevard.

“We looked all over the state for a large enough site, close to transportation, shopping, and medical facilities,” said Bill Bullock, Minto Communities senior vice president. “Plus, Daytona Beach is world famous. It’s a natural fit.”

The homes, explained Bullock, are designed for entertaining. The single-floor plans for Latitude Margaritaville’s two- and three-bedroom

homes are organized around an open-plan great room and expansive kitchen with plenty of outdoor space. The project broke ground in February, and a sales center for the development’s 6,900 homes is expected to open this fall.

“We are excited to partner with Minto and believe this relationship will redefine lifestyle destination living in Daytona Beach,” said Margaritaville CEO John Cohan, in a prepared statement. “With Minto’s expertise in creating master-planned developments and Margaritaville’s inherent ability to deliver fun and escapism, Latitude Margaritaville has the exact coordinates for those looking to live the Margaritaville lifestyle as they grow older, but not up.”

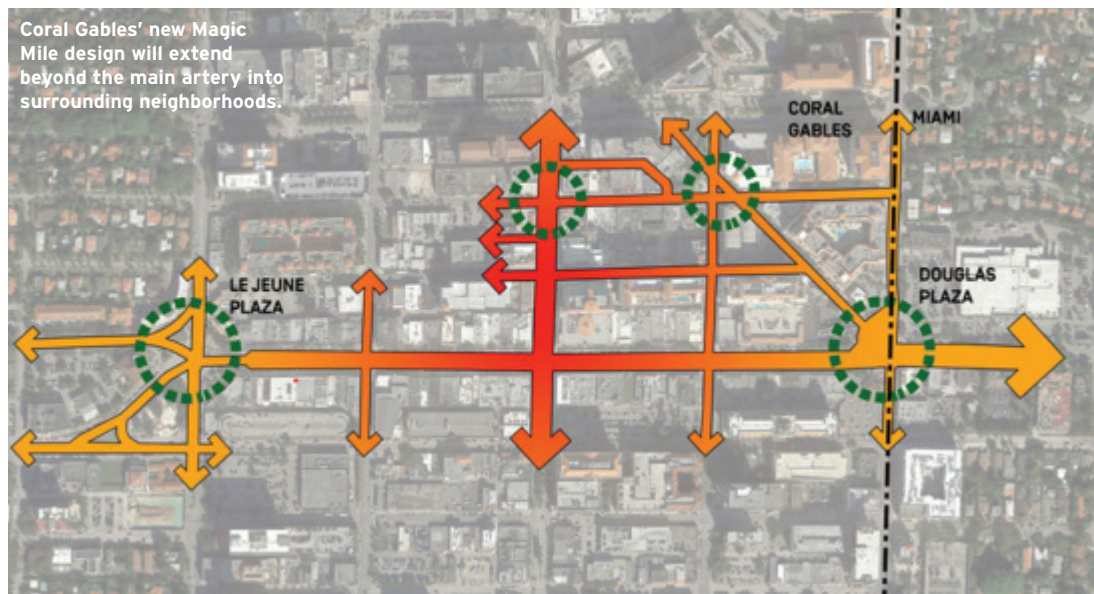
Well, cheers to that.

AUDREY WACHS



COURTESY LATITUDE MARGARITAVILLE

Architecture for those
who like boats, beaches,
bars, and ballads.



COURTESY DIGITAL BLACK MAGIC

SHOPPING RE-CENTER continued from front page typology, are going through major change. Whether due to a changing economy or a changing customer base, malls—as 1990s mall rats knew them—are disappearing. Instead, new configurations and old ideas are shaping the way people are shopping, and if there is one place to look at this change, it's Florida.

Florida has weathered the last decade relatively well. Buoyed by its massive tourist industry and the ever-replenished retiring baby

boomer population, malls across the state still draw crowds. Even so, these palaces of consumerism are not impervious to the changing tastes of the country. As national retailers such as Macy's and J.C. Penney fall on hard times, the anchor stores have become literal anchors—dragging.

Although new "traditional" malls are rarely being built, shopping centers are still popping up, or being reformatted. Perhaps ironically, one of the most popular mall replacements are retail streets.

Many of these have been commercial centers for decades, but so many of them declined as malls gained in popularity. Across Southern Florida, the towns and suburbs surrounding Miami have rushed to remodel and reinvigorate their "urban" shopping streets.

The next of these to be realized will be Coral Gables' Miracle Mile. The half-mile main east-west drag through town, Coral Way, has been home to numerous mom-and-pop stores, many of which have struggled to survive. The

urban design, by New York firms Cooper Robertson and Local Office Landscape Architecture, aims to replace the narrow sidewalks and copious angled street parking with a more pedestrian-friendly experience. Flexible plazas, outdoor dining spaces, enlarged planted areas, redesigned wayfinding graphics, and an improved lighting scheme will be used on and beyond the Miracle Mile. Stretching off on neighboring side streets and focusing on intersections, the plan will reframe the area as a full retail district. While the model for the project is a European shopping experience, overhead LED lighting and bright street pavers will be decidedly Florida, evoking the shapes and movement of raindrops and water ripples.

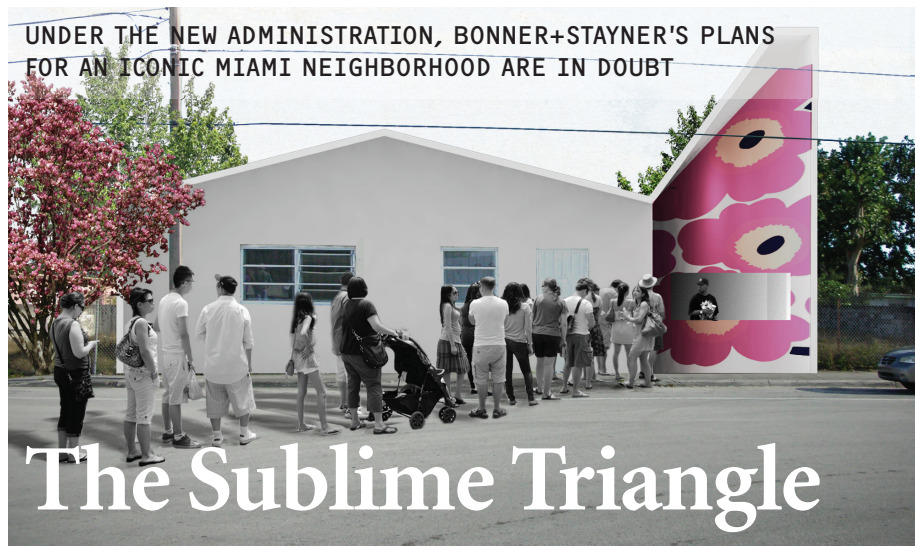
The Miracle Mile will be just one of the many revitalized shopping streets in the Miami area. It will join Palm Beach's Sunset Drive and Worth Avenue, and Lincoln Road Mall in Miami Beach as alternatives to traditional malls. Yet while these more established venues are seeing new life, traditional malls are being completely rethought. New retailers and new customer expectations are being formalized as street-mall hybrids on a scale that has not been seen before.

The Miami Worldcenter will be

a 27-acre mixed-use development in downtown Miami. At the heart of the \$2 billion project is a "High Street retail promenade and plaza" which will include retail, dining, and entertainment along a pedestrian street. The project is so large—it will also contain 2,000 residential units and 1,700 hotel rooms—that it will connect the Central Business District and the Arts & Entertainment District, changing the way tourists and Miamians move through the downtown.

Boston-based Elkus Manfredi Architects is leading the master planning as well as designing three of the buildings for the project. The firm's experience designing the extremely popular Grove and Downtown Disney projects in Southern California make it particularly suited for the project. Even so, the Worldcenter is on a much larger scale and addresses particularities of downtown Miami.

"Miami is evolving from a car-centric city to a pedestrian-oriented city," Howard Elkus, founding principal of Elkus Manfredi said. "By focusing the energy of our project at the street level, we are able to create more vibrant streets and public spaces. Our dynamic open-space network now includes a system of parks, plazas, and car-free promenades **continued on page 9**



COURTESY BONNER + STAYNER

"Made in Opa-locka" (MOL) is an urban revitalization plan—developed by Bonner+Stayner, a collaborative made up of Jennifer Bonner of the Boston architecture firm MALL and Los Angeles's Christian Stayner of Stayner Architects—for Miami's Opa-locka neighborhood.

The plan was made possible by President Barack Obama's American Recovery and Reinvestment Act of 2009 under the United States Department of Housing and Urban Development (HUD)'s Neighborhood Stabilization Program, which sought to address an overabundance of housing and monocultural zoning regulations that, over time, have stifled economic development in the neighborhood.

The 4.2-square-mile neighborhood was originally developed as a speculative suburb by aviation pioneer Glenn Curtiss in 1926. Colloquially called "The Triangle," Opa-locka is best known for its Moorish-inspired architecture: The community was designed by local architect Bernhard Muller and inspired by *One Thousand*

and One Nights. Muller, who was educated at the Ecole des Beaux Arts in Paris, designed the homes and public buildings with sculpted stucco forms, domed roofs, and tall minarets. Today, twenty of the original Moorish Revival structures are listed on the National Register of Historic Places as part of the Opa-locka Thematic Resource Area. In recent decades, however, the neighborhood has suffered from long-term disinvestment and the effects of structural poverty.

MOL was formed by the Opa-locka Community Development Corporation—a local nonprofit started in 1980 that has developed 145 single family homes for low-to-moderate-income first-time homebuyers and built over 2,500 units of rental housing in the community since its inception—as a plan to stem population loss and facilitate economic revitalization.

Bonner explained: "MOL acknowledges that building more housing in Opa-locka wasn't going to work. In fact, there was a surfeit of housing

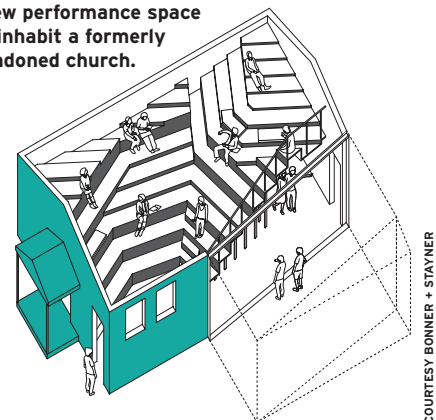
in the community already, as people were escaping to other parts of Miami if they could afford it." Instead, the architects embarked on a mission to modify existing single-family residences and other structures in the neighborhood in order to create the conditions for greater economic potential. "The housing had to be connected to small-scale commercial activity," she continued, "and that commercial activity needed to be networked, both to benefit the existing residents and to change Opa-locka's image as Miami's mecca of crime, churches, and crumbling Moorish architecture."

The architects designed plans to convert an abandoned church at the edge of the neighborhood into a performance space and movie theater. The church's hollowed-out nave was infilled with a raked set of stepped platforms that could be used as amphitheater seating, while a corner of the building was sliced off and replaced with a length of glass wall to add a public dimension to the structure. The seating platform conceals beneath it an Americans with Disabilities Act-compliant community bathroom, as well as a space that can be used to house a small lending library, historical exhibitions, and a coffee kiosk. The designers also envisioned converting an existing home into an after-school-program headquarters and business incubator. By removing, repurposing, and reconfiguring the home's interior partitions, Bonner+Stayner could create a flexible office setting. They populated the space with different assortments of custom office furniture that could be used to facilitate a variety of programming, and envisioned the space transitioning from a business center during the day to a tutoring facility at night. Here, too, a corner of the building has been lopped off and replaced with an expanse of glass. The MOL plan includes other so-called "micro-enterprise" zones, such as a bicycle repair

shop, laundromat, hair salon, and recording studio, aimed at diversifying the functionality of the neighborhood.

Currently, the project is languishing as changes in the presidential administration have cast an uncertain future for not just the project itself, but the existence of HUD in general. After a divisive and starkly anti-urban campaign, former surgeon Ben Carson was nominated and confirmed to lead the agency. Carson is seen by many as being unqualified to handle the reins of an expansive bureaucratic entity tasked with overseeing the United States Federal Government's programs for home ownership, low-income housing assistance, fair housing, homelessness alleviation, and distressed neighborhood and housing development. The new secretary is also seen as a skeptic of the very programs he has been tasked with leading. Regarding Carson's appointment as relating to the future of the MOL project, Bonner said, "The future of the project hangs in the balance due to the new administration's moves to dismantle [HUD] by appointing a skeptic of the anti-poverty programs that HUD oversees, and likely eliminating the funding that will see the project finished." **AP**

A new performance space will inhabit a formerly abandoned church.



COURTESY BONNER + STAYNER



COURTESY DIGITAL BLACK MAGIC

SHOPPING RE-CENTER continued from page 8

anchored by a major urban plaza that will become the heart of Miami.”

In its original form, the Worldcenter resembled a more traditional mall, a three-level indoor shopping experience with large big-box anchors. Over the course of the design, the nature of retail had changed enough that the anchor-store model was rethought. The project quickly shifted

to a more urban plan with separate blocks and pedestrian streets. Luckily for the development, a recent change in Miami’s zoning code made the project possible as an outdoor retail district. In particular, the Miami 21 zoning code, a new form based code that regulates building form standards, public space, and street standards. The code is guided by base tenets of the New Urbanism and

Smart Growth movements. Both focus on pedestrian- and community-based design.

As customers demand more engaging shopping experiences with more complex programs, retail developers are not far behind with epic new shopping districts. From rehabilitated retail streets to newly built mixed-use districts, shoppers may soon be more likely to run into dapper flaneurs than escalator-riding mall rats. **MM**

AN HISTORIC SKATEPARK IS REPLICATED—AND MEMORIALIZED— IN TAMPA



COURTESY PERRY HARVEY PARK

The Bro Bowl—an erstwhile icon of Tampa’s skateboarding scene—reopened last year with its spirit transposed to a graffiti-free imitation just a few hundred feet from its original footprint. While the skate park initially strained relations between the area’s skateboarders and the African American community—both made full-throated claims to the site—it seems that the new design has assuaged both sides.

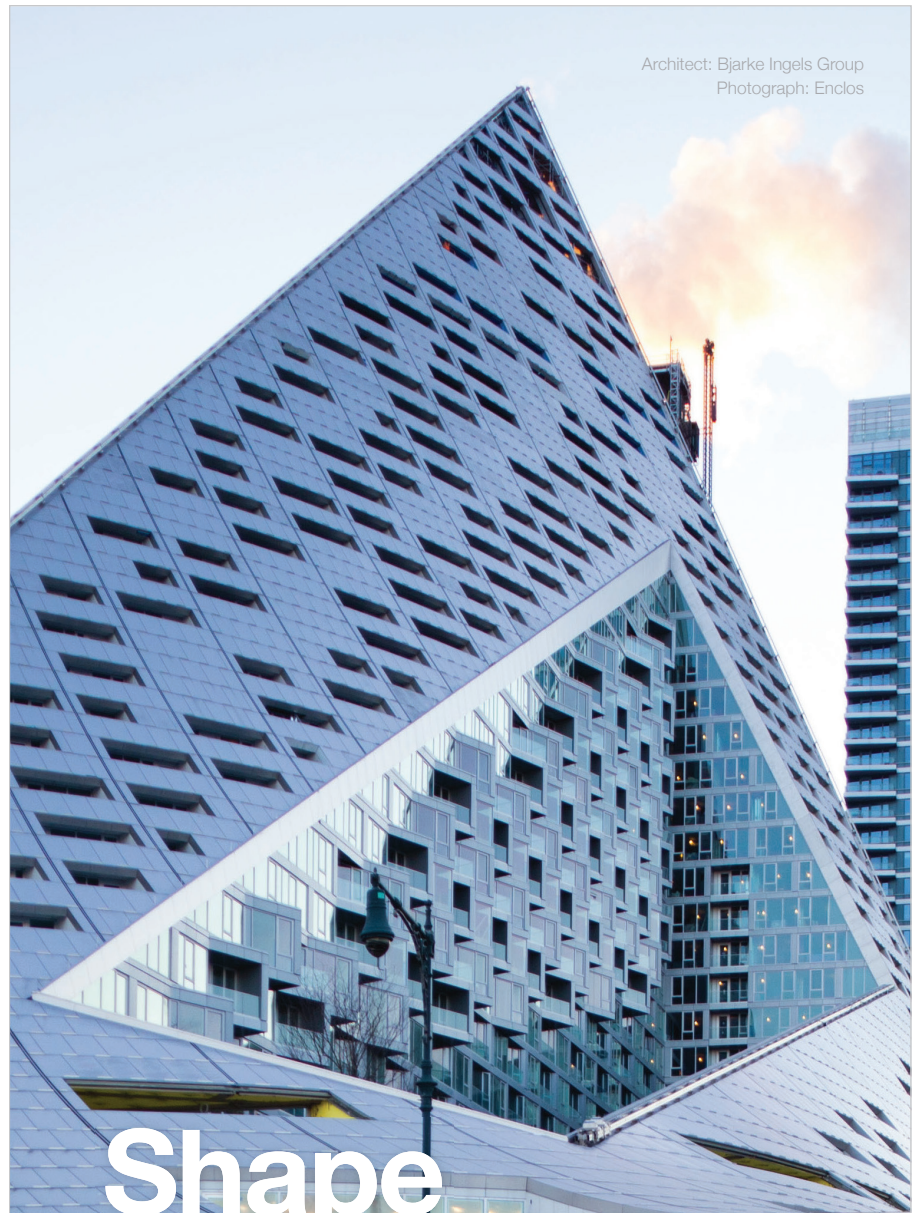
Planner Joel Jackson, a City of Tampa employee who seized on what was then a sub-cultural sport, was inspired by the informal use of swimming pools and designed the Bro Bowl in the mid-seventies. Built in 1978 as part of the Perry Harvey, Sr. Park, the Bro Bowl was among the first skate parks in the country. For the activists involved with brobowl.org, the demolition of

the landmark in 2015 marked the loss of a cultural and social memory, especially considering that the move effectively revoked its historic status. Other activists claim that the site was significant not simply as a nostalgic moment in history, but as a public commons essential to resisting the commercialization of private skate parks.

For some, however the removal of the Bro Bowl was a necessary part of a larger city-led effort to transform the Scrub neighborhood and Central Avenue drag. Many community leaders saw the redevelopment initiative as a method of reclaiming a bygone history of the African American experience in Tampa. The neighborhood has been occupied by African American families as far back as the Civil War, and has seen a growth

of African American-owned businesses throughout the years. But under the auspices of urban renewal, some claim that much of this community was decentralized and even permanently lost. The redesign of Perry Harvey, Sr. Park and the investment in residential and commercial projects nearby was an attempt to realign the residents with the heart of their community.

Tension between the two stakeholder groups has largely subsided in the wake of the park’s overwhelming success. The site of the former Bowl was replaced with a series of display apparatuses with imagery and text detailing prominent members of the African American community, both locally and nationally, as a kind of urban storytelling. Though the Bowl lacks the material history that was so beloved by the skateboarding world, small parts of the extant concrete surface remain in situ. The new skatepark was designed using laser-imaging technology to recreate the feel of the previous concrete surface. According to the *Tampa Bay Times*, local skateboarders are impressed by the similarities between the original and the replica, “They almost nailed it,” Brian Schaefer, Skatepark of Tampa founder, told the *Times*. **AD**



Architect: Bjarke Ingels Group
Photograph: Enclos

Shape Up

What if a skyscraper didn’t have to look like one? That was the question posed by **Bjarke Ingels Group (BIG)** when the firm was approached to design **Via 57 West** on Manhattan’s West Side. By creating a courtyard-centric building whose sail-like facade plunges to street level from a height of forty stories, BIG made a statement, and a challenge for the facade’s installers. The resulting double-curved form required more than 1,200 unique panels—and the skill of ornamental metal ironworkers to put them in place. Read more about it in **Metals in Construction** online.

 **Ornamental Metal Institute of New York**

WWW.OMINY.ORG

THE ARCHITECT'S NEWSPAPER APRIL 1, 2017

Cuba's Beaux Arts, early modernist, and post-revolutionary architectural relics are threatened, even as economic conditions slowly improve.



AS CUBA'S ECONOMY EMBRACES GLOBAL TOURISM, MODERNIST WORKS FALL UNDER THREAT

DOCO-OH NO

Preservation efforts aimed at recognizing and restoring Cuba's storied architectural relics—long a pet project within professional and academic circles—might finally become mainstream as the country adopts market-based policies.

The implications of these economic and political changes for Cuba's cultural heritage—much of which suffers from decades of deferred maintenance—are potentially vast and unknown. Architect Belmont Freeman, who has led many tours to Cuba on behalf of Docomomo and the Society of Architectural Historians, said, "There are a lot of cranes in Havana right now, every one of them related to a hotel project."

Recent years have seen a ballooning interest in Cuba by international hoteliers. European luxury-hotel group Kempinski is set open its first hotel in Cuba this summer. The hotel will feature 246 rooms in the renovated Manzana de

Gómez building, a UNESCO World Heritage site that was designed as Cuba's first shopping mall in 1910. Starwood Hotels & Resorts Worldwide is also entering Cuba by taking over operations of Havana's neoclassical Hotel Inglaterra, the Hotel Quinta Avenida, and the colonial-era Hotel Santa Isabel. The move makes Starwood the first United States hotelier to enter the Cuban market since 1959. Hotel Quinta Avenida was renovated in 2016 and opened last summer. The Hotel Inglaterra, originally built in 1844, is expected to open in late 2017 after its renovation.

Real questions exist, however, not only in terms of the quality of these renovations, but also with regard to the status of other cultural, archeological, and architectural artifacts in the country. Cuba is home to a vast array of architectural history, including relics and sites important to the indigenous cultures that originally inhabited the island.

However, colonial-era fortifications and more recent building stock, including successive waves of 18th-, 19th- and 20th-century development, make up the vast majority of structures across the country. What will happen to those less prominent and more sensitive relics? Many of the city's inner neighborhoods are filled with eclectic Beaux Arts-style structures, while the outer city and its environs are a hotbed of proto- and early-modernism, with works like the Hotel Nacional by McKim, Mead & White from 1930 and the Habana Libre Hotel by Welton Becket with Lin Arroyo and Gabriela Menendez from 1958 standing out both in terms of architectural style and for their respective roles in local and international history.

Furthermore, the Revolution's communist utopianism was codified through the prodigious production of radically progressive works of architecture by Cuban modernist architects. Those works include the expressionist National Schools of Art by Ricardo Porro, Vittorio Garatti, and Roberto Gottardi from 1961; the Brutalist Ciudad Universitaria Jose Antonio Echeverria (CUJAE) building by Humberto Alonso from 1961; and the vast neighborhoods

of Habana del Este that are made up of locally derived designs modeled after Soviet modular apartments.

It is unclear if and when future building improvements are undertaken across the city, whether more recent works of architecture will be prized to the same degree as colonial-era works. Freeman painted a grim picture, saying, "There has been a steady pace of cosmetic refurbishment of old buildings in the colonial core of Old Havana, but (generally speaking) historic preservation efforts have not picked up in any significant way except for those related to tourism infrastructure."

The effects of the recent formal economic and political changes in official policy are not necessarily new phenomena, however: Havana has strong track record of using historic preservation as an economic driver. The office of the City Historian, led by Eusebio Leal Spengler, has pioneered local attempts to embed the preservation and restoration of Old Havana's neighborhoods into economic development plans. Old Havana is a UNESCO World Heritage Site in its own right, and while many projects in the colonial core have benefitted from Leal Spengler's efforts—namely the restoration of Plaza Vieja and a slew of other properties the office has converted for hotel and tourism uses—many of the city's early modernist and post-revolutionary architectural marvels sit in various states of decay and disrepair. The restoration of the National Art

Schools was, until recently, slated for completion and renovation. Those efforts have petered out, subsumed by a new economic downturn following geopolitical turmoil in Venezuela, one of Cuba's chief oil providers.

Cuban architect Universo Garcia Lorenzo, who was coordinating the renovations for the National Art Schools until the funding dried up, explained that with the Cuban government strapped for cash, major restoration projects in the country will have to rely on international funding. Some help is coming: The Italian government is funding the continuation of work on Gottardi's School of Dramatic Arts and also, England's Carlos Acosta International Dance Foundation was working to finance the rehabilitation of the ruined, Garatti-designed School of Ballet. But, Garcia Lorenzo said, "I can't speculate now on when the restoration will be completed," adding that despite the fact that Porro's School of Plastic Arts and School of Modern Dance had been completely renovated in 2008, the current funding lapses meant there would be a shortage of funds "dedicated to maintaining those structures into the future."

International funding cannot come soon enough, as the partially completed and dilapidated structures are exposed to the tropical elements. Garcia Lorenzo said, "Essentially, the three unfinished buildings are frozen in time, slowly decaying and waiting to be restored." **AP**



FIU students have been participating in the Open Studios at the Dessau campus.

FLA-HAUS continued from front page materials in the world. So far, FIU students and faculty have been participating in Open Studios at the Dessau campus, and, this year, FIU plans to inaugurate the space for the FIU-Bauhaus Think Tank. Additionally, FIU announced that it will create an international artist residency program with Bauhaus Dessau in 2018. "The FIU-Bauhaus Think

Tank and its related projects respond to all of the aspirations of the College of Communication, Architecture + The Arts, [CARTA] 2020 plan [the university's mission to expand and elevate its position as Miami's 'first and only public university']," said Marilyns Nepomechie, professor of architecture and associate dean for Strategic Initiatives, College of Communication, Architecture + The Arts, who recently visited the Dessau campus to solidify the program.

OLIVIA MARTIN

STAR STRUCK continued from front page envisioned as a stand-alone destination while still fitting into this fantastical setting.

Leveraging the existing iconic dome of the Planet Hollywood, Elkus Manfredi reimagined the building as an epic late-19th-century observatory. A new brick base, complete with arched windows and truss details, adds 5,000 square feet to the project. A tensile Teflon-coated silver fabric resurfaces the dome, referencing the metal domes of vintage observatories, and completes the thematic exterior transformation. Outdoor seating and an exterior stair, encased in a radio-tower-esque structure with another exterior bar, give guests a whole new set of dining options.

The interior of the spherical building has four levels. At the heart of the space, a mock vintage telescope rises through all three of the main dining and entertainment stories. Throughout the whole project, planetary and stellar motifs adorn everything from the

custom carpet to the multimedia screens, but each floor has its own character. The main dining level is large and open, connected to the outdoor terrace overlooking Disney Springs. The second level is more intimate, with a smaller dining area and a lounge area geared toward adults. The top dining level on the fourth floor is the most intimate space in the restaurant. Guests here are closest to the dome and the projected stars on its inner surface.

While the restaurant will no longer sport the familiar 1990s Planet Hollywood branding, that does not mean that everything will be replaced. Multiple displays of Hollywood memorabilia are still part of the project's experience.

The timing of this transformation seems only appropriate. As NASA continuously announces the finding of exoplanets in neighboring star systems, perhaps this new observatory will help Disney discover its own planet... Hollywood. **MM**



GEORGE ECHEVARRIA

REEFER MADNESS continued from front page "Miami has been submerged and emerged multiple times over recent and long-term geologic history," explained Foord. "Coral keystone mined from the Florida Keys was used all over Miami—much of the city is made from marine calcium carbonate, some of which is the coral skeletons themselves. That is the baseline of our metaphors: the similarities between the city being like a coral reef and the coral reef being like a city. A reef is a 3-D ecosystem that is urban life on top of urban life; it's fast and colorful and full of diversity."

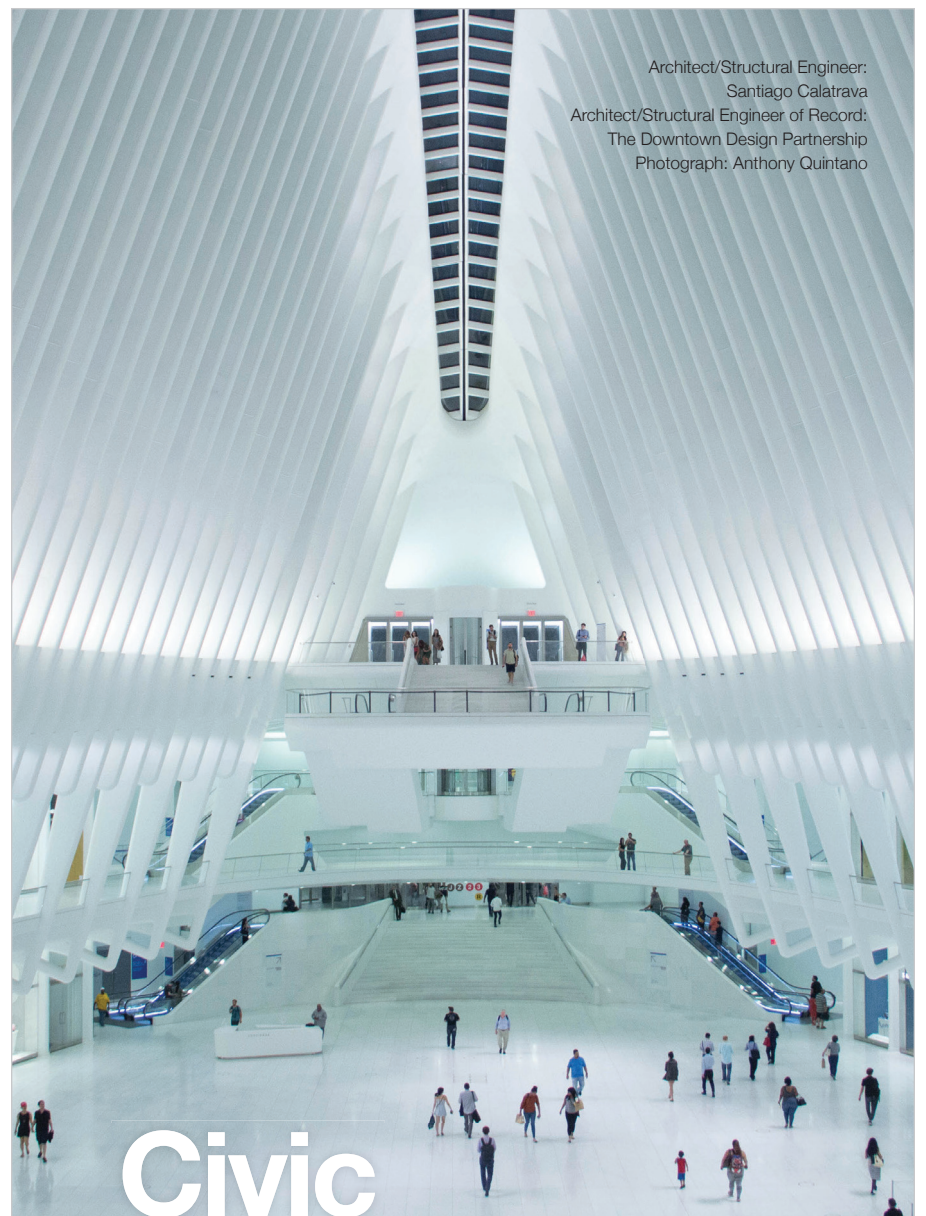
Coral Morphologic films the corals growing in its lab and then composes unique soundtracks for the videos to create mesmerizing artworks that are equal parts *Planet Earth* and *Acid Test*. The films are usually captured in a single shot using high resolution to capture the corals' unique fluorescent qualities, and sped up to showcase the corals' movements, which otherwise happen at a rate slower than humans want to watch.

In late February, Coral

Morphologic teamed up with independent cinema non-profit Borscht Corporation, music, arts, and technology festival III Points, and alternative band Animal Collective to create a site-specific performance at the Frank Gehry-designed New World Center in Miami Beach. Using multiple projectors, Foord and his cofounder, musician Jared McKay, screened their coral videos on all five of Gehry's iconic sails while Animal Collective performed an hour of new music inspired by the reefs. According to Foord, the New World Center has one of the most advanced audio-visual systems in North America and the massive, swooping sails—the largest is 7,000 square feet—lend themselves well to the immersive experience. There are plans to adapt the performance to a planetarium setting in order to bring it to more audiences in the future.

This is the second performance on which Coral Morphologic, Animal Collective, and Borscht Corporation have collaborated: In 2012 they presented a film on the outside of the New

World Center. Previously, Coral Morphologic has projected its coral videos on architecture around Miami and created a large-scale installation in 2009 at Miami's Art Basel. "By projecting corals onto cement and limestone walls, we are sort of referencing the geologic path," says Foord. "All of the city was once under water, so it's a very pertinent reminder that the coastline is not a static thing. We are essentially creating artificial reefs because, when the sea level rises and the buildings go under water, the corals will recolonize the cement—essentially, the bones of their ancestors—and they will inherit the city." Foord and McKay believe that humans have much to learn from corals, from their slow timescale (there are corals alive in Florida that predate Columbus's arrival to the New World) to their adaptability. For example, corals now inhabit Biscayne Bay, a formerly brackish, mostly freshwater site turned saltwater bay, and have even glommed onto manmade infrastructure, including highways and artificial islands. They have survived numerous climate shifts, an impressive feat considering that corals are cemented in place and cannot leave if an environment becomes uninhabitable. According to Ford, "Miami has sort of inadvertently become a coral laboratory funded by taxpayers, and if we can begin to understand how coral can adapt and respond to this environmental upheaval then perhaps Miami can be a glimmer of hope in adapting to these changing environmental conditions." **OM**



Architect/Structural Engineer:
Santiago Calatrava
Architect/Structural Engineer of Record:
The Downtown Design Partnership
Photograph: Anthony Quintano

Civic Duty

New Yorkers watched in awe as ironworkers erected each of the **World Trade Center Transportation Hub's** steel ribs into place. Now, 250,000 commuters marvel at the 12,500 tons of structural steel arching overhead as they pass underneath each day. The vision of international architect **Santiago Calatrava** and his team, the Hub's central Oculus connects New Yorkers not only with the places to which they need to go—but with the skilled labor needed for such a vision to be realized. Read more about it in **Metals in Construction** online.

Steel Institute of New York

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CHECKING IN ON MIAMI'S LANDMARK FIRM ARQUITECTONICA ARQUITECTONIC SHIFT

Arquitectonica was founded in 1977 as a loose collective of designers working out of a Miami strip mall. The original five members were Bernardo Fort-Brescia, Laurinda Spear, Andrés Duany, Elizabeth Plater-Zyberk, and Hervin Romney. Though Duany, Plater-Zyberk, and Romney eventually went off in different directions Fort-Brescia and Spear remained as Arquitectonica and created the most important Miami architecture firm in the world. They gained early fame for their Brickell Avenue high rise the Atlantis Condominium. The Atlantis appeared over the credits of the television show Miami Vice in the 1980s and helped create the image of glamorous style now associated with the city.

The firm is the first one in South Florida to have an ambition larger than the city itself and has built all over the country and overseas. It now has over 850 employees working in eight other cities from Paris to Shanghai and is currently building in 58 countries around the world.

A survey of the firm's projects currently on the boards reveals an astonishing number of large skyscraper and complexes that display its ability to create stylish exterior facades and interior public spaces.

Arquitectonica has built dozens of important buildings in Miami, but

one that highlights its current design philosophy is the massive Brickell City Centre just blocks away from its early residential buildings. The Centre is a massive 4.9-million-square-foot development on 9.1 acres, including an underground car park, two mid-rise office buildings, two residential towers, a hotel with residences, and 500,000 square feet of retail and entertainment space. The centerpiece of the project is a large open-air shopping mall covered with a sculptural glass canopy called the Climate Ribbon (In collaboration with Hugh Dutton Associés,

Cardiff University, and Carnegie Mellon University) that snakes through the projects and acts a brise-soleil and flange for catching prevailing winds. Fort Brescia was tasked with developing the uniform look of the Centre in his signature glass-and-steel manner.

Brickell City Centre sits adjacent to the city's geographic heart and connects to key transport nodes by incorporating the Metromover light-rail station and offering easy access to all major highways. Arquitectonica is known for developing stylish interiors and even product design (lead by Spear) but in Brickell Centre they are virtually designing a new city within a city that will likely become the new heart of the region. **WILLIAM MENKING**



COURTESY ARQUITECTONICA

Crest Apartments
Michael Maltzan Architecture
LEED Platinum

Photo: Iwan Baan

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ZAHA HADID
ARCHITECTS

When 62 floors accommodate 83 living units, you can presume listings will not include the words “cozy” and “poky.” This, along with the fact that Zaha Hadid Architects’ (ZHA) residential high-rise in Downtown Miami is virtually column-free inside, residents can expect plenty of room—and a glass fiber reinforced concrete (GFRC) panel or two.

Located on the water’s edge and overlooking Herzog & de Meuron’s Pérez Art Museum, ZHA’s One Thousand Museum’s curvaceous exoskeleton makes a statement. In accordance with the vernacular of condominium buildings in the city, the structural framework is all white, but that’s where the building’s flirtation

with Miami modernism ends.

Instead of the once-standard stucco-and-white-paint procedure, GFRC comprises the exoskeleton’s casing. “There was an idea from the start that we wanted the architectural and structural expression to be synthesized,” said Chris Lépine, associate director at ZHA. “We wanted a very fluid exoskeleton.”

Manufactured in Dubai by cladding fabricators Arabian Profile, 4,800 pieces of GFRC are in the process of being shipped to South Florida. Upon arriving in the Port of Miami, they are taken east to Doral, Florida, to be processed, then back to a prep yard in Miami, and finally onto the construction site.

GFRC was first used by ZHA on the Heydar Aliyev Center in Baku, Azerbaijan, where the material was used purely for cladding. In Miami, however, GFRC acts as formwork for poured concrete. This casing is assembled off-site to ensure quality control and continues its use as the exoskeleton’s finish. “It is all part of the building process, it’s not simply a cosmetic piece,” said Lépine.

Billowing at the base, gill-like forms comprise the tower’s eight parking levels. The gills act as such, providing natural ventilation to the garage area while also instigating a sense of verticality at street level. The curves coalesce and continue their way up the building, bulging at around two-thirds of the way up. Like the GFRC casing, this too was not an aesthetic choice. The wider section accommodates the structural load of the 54 floors above, including a rooftop helipad and a two-story penthouse at what Lépine described as the building’s “crown.”

While serving as a structural device and taking on the typical billowing form ascribed to Hadid’s aesthetic, the exoskeleton also produces wide-open floor plans. “We wanted it, to a degree, to reflect what was going on inside the building,” said Lépine. In addition to the penthouse, there are eight full-floor apartments and 70 half-floor units.

Much of the enclosure is set back from the face of the exoskeleton with the glazing system being abutted and sealed to the structure, thus allowing for apartments to be self-shaded. The exoskeleton is expressed inside with the GFRC entering apartments. It can also be touched. (There’s no fear of heat loss through thermal bridging in Miami.) Balconies are further recessed, “almost created as depressions behind the structure,” Lépine said, and result in the glass facade folding and faceting

Residents looking out from the east facade will be treated to expansive views over the Pérez Art Museum and across the water.



Mullion placing indicates just how far stepped-back fenestration will be for the structure to act as a shading device.



DANIEL AZOULAY STUDIO

behind. “There is a nice interplay between the two materials, as well as with how light casts down upon the structure and fenestration,” he added.

Aside from palatial living units, One Thousand Museum is laden with luxury amenities: thirty thousand square feet of communal areas, including a two-story aquatic center, a sky lounge, a multimedia theater, a wellness spa, gym facilities, and a private event space—naturally, a “bank quality” vault is also included.

Ground broke on the building in December 2014. During the summer of 2015, one thousand trucks rolled onto site to pour 9,500 cubic yards of concrete in 24 hours to start the One Thousand Museum’s foundational work. The building is currently due for completion in 2018. **JASON SAYER**

Left: The curvaceous structure will remain just as defined when the facade is complete; Top: Residents looking out from the east facade will be treated to expansive views over the Pérez Art Museum and across the water.

RESOURCES

Developers:
Louis Birdman, Gregg Covin, Kevin Venger, and the Regalia Group

Structural Engineer:
DeSimone Consulting Engineers

Construction:
Plaza Construction

Landscape Design:
Enea Landscape Architecture

Local Architect:
O'Donnell Dannwolf & Partners Architects

Interior Lighting:
O'Donnell Dannwolf & Partners Architects

COURTESY DEVELOPER STRATEGIC
PROPERTY PLANNERS

A MASSIVE DEVELOPMENT ACCELERATES TAMPA, FLORIDA'S GROWTH

TAMPA-D UP

Tampa, Florida, is one of the fastest growing cities in America. But one development in particular is set to catapult it forward more quickly than any other.

Developer Strategic Property Partners (SPP)

is planning a roughly 50-acre, 9-million-square-foot, \$3 billion, mixed-use project on the south side of the city’s downtown that will employ more than 15 architecture teams, designing more than 20 buildings. The first phase is slated to be complete by the end of 2020.

While the full team will be announced next month, confirmed architects include Morris Adjmi, COOKFOX, and Alfonso Architects, and landscape architects Reed Hilderbrand. Master planners include David Manfredi of Elkus Manfredi Architects, Jeff Speck of Speck & Associates, and David Dixon of Stantec.

Currently the site, edging the Hillsborough River and other local bodies of water, is a warren of oversized roads, parking lots, empty warehouses, and some lonely-feeling, but important, buildings like the Tampa Convention Center, Amalie Arena, Tampa Bay History Center, and the Florida Aquarium.

In order to create a more vibrant, urban

environment, the team, said SPP CEO James Nozar, is paying careful attention to elements like walkability, architectural and programmatic variety, sustainability, landscape, and public space.

“We want it to feel authentic despite the fact that everything is going up at the same time,” said Nozar, who focused on the exceptional variety of architectural talent involved, a re-instituted street grid, and a careful balance of “depth, shadow, [and] context,” and “defining where the special moments happen and where the background fabric is.”

A dizzying amount of uses include over 2 million square feet of corporate office space, 200,000 square feet of creative and tech office space, a 320,000-square-foot facility for the University of South Florida Morsani College of Medicine, a 400,000-square-foot medical arts building, 5,000 new residential apartment and condominium units, 750,000 square feet of new

retail and cultural arts uses, a new arts pavilion, two new hotels, and the renovation of the existing Marriott Waterside Hotel & Marina.

The project, added Nozar, is pursuing WELL Building Certification, focusing on human health and wellness elements like fitness, light, and comfort. SPP is a joint venture between Cascade Investment LLP (Bill Gates’s investment fund) and local businessman Jeff Vinik, who owns the Tampa Bay Lightning hockey team.

The city of Tampa has pledged to chip in \$100 million for the site’s infrastructure, including new and updated roads, sidewalks, water, sewer, and park spaces, confirmed Bob McDonough, Tampa’s economic opportunity administrator. “They have very ambitious plans and we’re very supportive of them,” said McDonough. “It’s an interesting opportunity; instead of doing this piecemeal, it seems to make sense to do this all at once.” Pending approvals, building is set to begin next spring. **SAM LUBELL**

THE ARCHITECT'S NEWSPAPER APRIL 1, 2017



Cloud Scape will bring rounded, extruded play surfaces to the Fort Lauderdale airport.

VOLKAN ALKANOGU CREATES A CHILDREN'S PLAY INSTALLATION AT THE FORT LAUDERDALE AIRPORT

In the Cloud

Work on a \$295 million modernization plan for the Fort Lauderdale-Hollywood International Airport's Terminal 1 by multiservice firm Gresham, Smith and Partners is nearly complete. The refresh, part of a slate of upgrades that will transform the regional airport into an international and domestic hub, will also host a 2,000-square-foot art installation and playground designed by architect Volkan Alkanoglu.

Alkanoglu's *Cloud Scape*, commissioned by the Broward County Board of County Commissioners' Cultural Division and located along a mezzanine level adjacent to one of the terminal's busy ambulatories, is "inspired by the idea of aviation and literally translates it into a physical environment at the terminal," Alkanoglu explained. The playscape—made up of four discrete structures arranged linearly in a sky-blue-painted

room—evokes the larger-than-life cumulus clouds one sees from an airborne plane and is, according to the architect, partially inspired by 1970s visionary designer Verner Panton's *Visona 2* installation, a "fantasy landscape" made up of a series of extruded, occupiable shapes.

Functionally, the caricatured shapes are designed to facilitate movement and play: They feature slides, portholes, and climbable surfaces all scaled to tot dimensions. The structures are for "playing in the clouds," the designer explained. "Before you take off or after you land, you have the ability to immerse into this landscape of clouds." Each is also designed to facilitate a different type of diversion. One takes the shape of a large donut, with a bubbly hole cut out of its center. Another is deconstructed, with each of the three constituent cloud profiles separated out to create a

sitting shelf, another donut-hole-penetrated mass, and a small slide. The third is made up of cloud-shaped wedges that come together in a tight corner. And the fourth structure is more solid, with supple climbing surfaces, a rounded-step ramp, and another tunnel.

Of particular concern for Alkanoglu were the strict fire- and life-safety codes the project had to meet due to its airport setting and the fragile nature of its fledgling users. The structures are built out of Fire 1-rated Medite, a type of medium-density fiberboard, painted in white automotive paint and finished in clear polyurethane. Regulations by the National Recreation and Park Association also played a role in the design, dictating the spacing—six feet—between the structures as well as the detailing for various edge and corner conditions. Everything sits atop light- and dark-blue colored rubber flooring.

The project, currently in the permitting stages, will be fabricated by Indianapolis-based Ignition Arts and is expected to be complete May 2017.

AP



COURTESY VOLKAN ALKANOGU

FUTURE-VILLE continued from page 4 centers as the impacts of climate change and sea level rise threaten the state's coastal communities. With sea levels predicted to rise between four inches and up to ten feet across the region, low-lying areas of the Miami region will see massive losses in real estate and untenable retrofitting costs. The simultaneous and ongoing population growth across that region will likely ultimately push residents to flee to higher, cheaper ground.

That's where Jacksonville comes in. Though some parts of the city lie on the coast, much of the city's land area

currently sits roughly 16 feet above sea level. As of 2010, Jacksonville had 366,273 households with an 11.8 percent vacancy rate, meaning that roughly 43,220 units are currently unoccupied. The relatively high vacancy rate means lower rents and, maybe more importantly, lower economic barriers to homeownership for first-time buyers—a growing problem for Miami's millennial residents. Jacksonville is also home to the nation's largest urban parks system, with 80,000 acres of parkland distributed across 337 sites, which according to Steiner, "bodes well" for any future

urban development. She explained, "Investment in public infrastructure like parks has a high level of pay-back in terms of raising quality-of-life."

Steiner added that the city faces challenges in terms of its urban layout; "another dilemma is the city's sprawled out urban form," she said, adding that because most of the development in the city has happened since World War II, the city is organized along "a series of major arterials and mega-blocks," a 3,400-mile long network of roads that deters pedestrian-oriented design. Jacksonville also has a bus-only transit system that,

aside from a downtown monorail line, leaves much to be desired in terms of mass transit.

The city, a short drive from the University of Florida's Gainesville campus, is however, poised for knowledge worker growth. Not only that, but the vast majority of Florida's recent population growth is not from an increase in births or even migration from other American states, but from a net influx of individuals moving to the state from foreign countries, with Cuban, Venezuelan, and Haitian immigrants showing up in the highest numbers. The impact of

climate change on those countries is currently unknown, but it is safe to assume that those communities would continue to grow should conditions back home deteriorate.

In a not-too-far off future, could Jacksonville provide a relief valve for the growing state? It's likely, and if city officials can prepare accordingly, Jacksonville's new residents might learn to love the city. "Sometimes," Steiner added, "I think Jacksonville is a diamond in the rough."

AUDREY WACHS, ANTONIO PACHECO

The Bass in Miami Beach, originally designed by Russell Pancoast.



ROBIN HILL/COURTESY THE BASS

THE ARATA ISOZAKI-RENOVATED BASS MUSEUM OF ART SCHEDULED TO OPEN FALL 2017 IN MIAMI BEACH

ALL ABOUT THAT BASS

After almost two years of construction, The Bass, Miami's museum of contemporary art, is scheduled to open this fall. The project was initially scheduled to be completed December 2016 to coincide with Art Basel, but was forced to extend the construction timeline to accommodate the extra care needed to revive a historic structure.

The original building was constructed in the 1930s and was designed by Miami architect Russell Pancoast. It was first built as the Miami Beach Public Library and Art Center—considered South Florida's first public space dedicated to art—and was renamed The Bass Museum of Art in 1964. Soon after, it was added to the National Register as "an exemplar of Art Deco architecture [sic]."

In 2001, the building underwent its first expansion at the hands of Arata Isozaki & Associates, a Tokyo-based architecture firm known for its work on projects such as the Museum of Contemporary Art in Los Angeles and the Olympic Stadium in Barcelona. The renovation added a wing to the building and a second level to house 16,000 square feet of exhibition space.

The museum board soon realized that it would need more room, and began plans for a second renovation, which broke ground in 2015. The team for this renovation includes Arata Isozaki & Associates and David Gauld, a consulting architect in New York, in addition to Jonathan Caplan of Project-Space, who redesigned the interior

aesthetic of the museum.

The new additions build on the existing footprint of the structure, creating three additional galleries for a total of six. A creativity center will be housed in a new education wing, quadrupling the museum's previous education space. The interior renovations are the most considerable in the building's history, involving the reconfiguration of two courtyards to accommodate a new museum store and cafe. Though the changes alter some of the existing footprint, they will also allow visitors to once again use the original entrance of the building from Collins Park.

"[The] historic building is of real significance to our community, and one of the few structures of its kind on Miami Beach," said Debbie Tackett, preservation and design manager for the Miami Beach Planning Department, in a statement. "The fact that the museum is striving to expand its exhibition and educational spaces while maintaining the integrity of the existing architecture makes this an example of resilient preservation."

The museum is scheduled to reopen fall 2017. **LAUREN LLOYD**



COURTESY THE BASS



PRISON REFORM

Deep in the Florida Everglades, surrounded by wildlife and natural preserves, an abandoned correctional facility has become the unlikely background for high-stakes military training operations, far from the public eye. The Hendry Correctional Institute, a former high-security state prison complex turned private training facility, is the

unlikely protagonist in a new generation of military-style training scenarios. Since 2012, the site has been run by Altair Training Solutions, a private enterprise that rents out the facility and provides training to clients across a spectrum of military, private, and security interests. Site organizers capitalize on the facility's

protective architecture, and its layers of security infrastructure left over from its prison days, to inject realism in simulated missions for special operations forces, law enforcement agencies, and weekend hobbyists. The site signals a shift in what we might think of as "adaptive reuse" in a niche market of the newly securitized

economy. Instead of repurposing an abandoned warehouse or a dilapidated factory into lofts or retail space, the scheme here was to reinvigorate a vast area on the urban scale—including 1,150 surrounding acres, a nearby county correctional facility, two hotels, houses, dining halls, a research and development facility, long and short shooting ranges, shoot houses, and a 3,800-foot-long private airstrip. Instead of targeting traditional market

forces, the land-grab speculation hinges on the presumed insatiable and continued interest of militarized forces in the kind of free-rein, live-fire, no-holds-barred urban expeditions that only an underused, remote, and built-up site allows. Such sites have long been objects of desire for the U.S. armed forces, which see them as ready-made approximations of emerging theaters of operations—stand-ins for the streets, markets, and central

business districts of hostile cities a world away. The RAND Corporation identified abandoned towns as future training gold mines in the mid-2000s. The U.S. military has, in recent years, used existing—and sometimes inhabited—domestic cities to add realism to their training regimens. But this site was identified and purchased by private citizens (albeit former-military), and was initially supported by public tax incentives (a

continued on page 20

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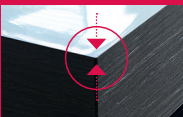


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BETSY-CARLTON HOTEL



A native Floridian, Allan Shulman grew up in Fort Lauderdale, completed his postgraduate studies at the University of Miami, and has since settled in Miami. It's no surprise then that he describes his firm, Shulman & Associates, formed in 1996 with wife Rebecca Stanier-Shulman, as a "regional design studio" (emphasis on studio).

Shulman though, draws influence from a variety of locations, all urban: New York and Paris—he worked briefly in both—and Tokyo,

where he studied for a year at Waseda University while taking a break from his undergraduate program at Cornell.

Shulman's main focus however is Miami Beach, a city that has been at the forefront of his academic interests and throughout his career as an architect and professor of architecture at the University of Miami. With the Nolli Map in one hand and new urbanist principles in the other, Shulman described the city as the "perfect

laboratory" for learning how to "use typologies as a basis for new design ideas."

A fascination with public space and semi-private networks, as well as an engagement with the urban environment are defining aspects of Shulman's approach to work. "We start by thinking about how we can expand, engage, and integrate into the public space and existing networks," he said. "We always try find one or more elements of the project that achieves that." **JASON SAYER**

BILLBOARD BUILDING



JUGOFRESH WYNWOOD WALLS



CABANA BAY BEACH RESORT



BETSY-CARLTON HOTEL
1440 OCEAN DRIVE, MIAMI

Bridging the 1938 art deco Henry Hohauser hotel to its new addition by Shulman is a silver sphere that disguises a pedestrian connection between the two buildings. The elliptical enigma transforms one of the many circulation arteries that run through the building's site into public art. A cafe extension on the building's side has the same impact: Triangular in plan, the cafe enhances the east-west alleyway that takes pedestrians from Española Way to the ocean by utilizing a landscaped roof deck as an amphitheater for poetry, also aligning with the hotel's historic mission of cultural programming.

BILLBOARD BUILDING
3704 NORTHEAST 2ND AVENUE, MIAMI

A pertinent example of Shulman's philosophy can be seen in the Billboard Building in Miami's Design District. Situated roughly 10 feet away from the elevated I-195 that heads to Miami Beach, the project sees a three-story 1920s commercial building joined to a sleek 90-foot-tall addition.

CABANA BAY BEACH RESORT
UNIVERSAL, ORLANDO

The 1,200-key hotel employs a post-war aesthetic prescribed by Universal Orlando Resort. "As architects, the challenge was to make the language feel new again and to avoid being purely retro," said Shulman. A central plaza-pool deck (once a necessity for the post-war vacationing class) is enlivened by amenities such as play and picnic areas, ping pong tables, and sand pits. Children can play as parents monitor from their balconies, all of which look into the space.

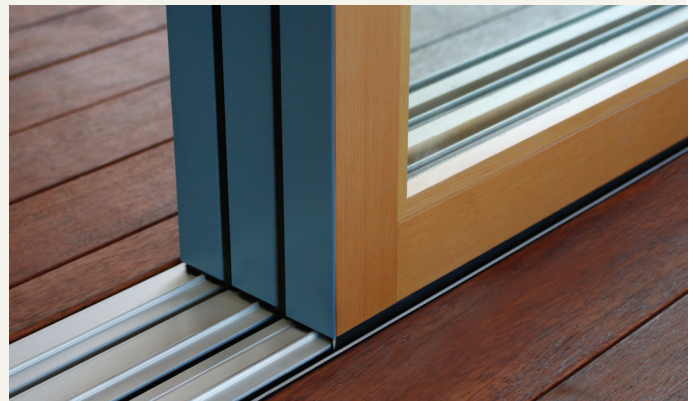
JUGOFRESH WYNWOOD WALLS
WYNWOOD, MIAMI

Located in the warehouse complex of Wynwood Walls—an area that features a coterie of industrial buildings covered in murals—is an outlet for juice and food bar Jugofresh. Sacrificing space to the public, Shulman proposed opening up two garage doors at either end of the building to activate a plaza once blocked from the street. A folding glass wall blurs boundaries further and creates a "breezeway" that features a wall of fans—an alternative Shulman pursued to avoid air conditioning the space. Jugofresh now uses the wide floor plan to host yoga classes and other activities. Inside, almost every shade of green abounds, employing a color palette as vibrant as its exterior (which couldn't be changed).

CABANA BAY BEACH RESORT



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MIAMI NICE

Miami's up-and-coming design scene is looking to the city's past, materials, and building vernacular to realize new design that is all about Miami. *AN* spoke with five of the hottest firms in the city to find out what the rest of us might be missing out on in the 3-0-5.



COURTESY NC OFFICE

NC-OFFICE

PETER NEDEV, ELIZABETH CARDONA,
CRISTINA CANTON, AND NIKOLAY NEDEV.

How does your practice's ideology manifest through your projects?

We believe that architectural design is a process of accommodation, rather than scientific deduction. Our practice does not subscribe to predetermined biases. Instead, we search for the most appropriate solution to any given condition largely influenced by the specificity of the place and the particular needs of the client. Our work aims to be environmentally conscious, sensitive in its use of materials, and appropriate to its dimensions. We believe that there is no single truth in the production of meaningful design.

Any upcoming project you are particularly excited about?

We are currently working on a commercial brewery and tasting room that will be located in Hialeah, Florida, within a new district created to promote art and culture called the "Leah Arts District." It will be the City of Hialeah's first brewery.

What trends should everybody be watching for in Florida?

There is a rediscovery of Florida's tropical vernacular and a return to that elemental knowledge in the use of louvers, screens and passive design strategies. These responses to site and climate are contributing factors for the implementation of current and new construction methods.



COURTESY CURE & PENABAD

CÚRE & PENABAD

ADIB CÚRE AND CARIE PENABAD

How does your practice's ideology manifest through your projects?

The portfolio of projects, both domestic and international, displays an intense commitment to the discipline of architecture, its material culture, and constructional conventions. The work challenges the double tyranny of program and diagram that have come to dominate the design process today, relying on a broader understanding of history and typology for a

looser and therefore more sustainable fit between program and form.

What trends should everybody be watching for in Miami?

Miami is a young city that has experienced unprecedented growth in the last decade. As the city develops its urban core in response to rising seas and global climate change, it is necessary to not only build more sustainably but to invest in the public realm, particularly with regard to public space and transportation.



COURTESY TOUZET STUDIO

TOUZET STUDIO

CARLOS PRIO-TOUZET AND JACQUELINE
GONZALEZ TOUZET

How do you approach design, and how does that set the office apart from others in Miami?

We are architects who love modernism and finely crafted design solutions. Our work is very intensely research driven—inspired by nature, technology, and the culture of the place or the people for whom we are designing. We think of our architecture and design as a way for us to tell stories and reflect about the people and the place.

Our attention to detail and understanding of materials is an area where our studio is fairly unique in Miami.

We love the creative exploration and intellectual journey as much as collaborating

with builders throughout the process on the end product. We probably do more historical and material research, and build more study models and full size mock-ups than other local firms. We still draw by hand extensively, as well as make heavy use of the digital tools available. We envisioned our studio to be a real collaborative studio environment, not just an architectural office.

Do you have a recent project that you are particularly excited about?

We recently completed a couple of flagship buildings on one entire block of historic Lincoln Road in Miami Beach, including the new Apple Store, Gap, and a recently completed Nike Store. All three projects were for global design brands that wanted a unique expression of their vision in Miami, and were very well-received by the Historic Preservation Board.



COURTESY STUDIO ROBERTO ROVIRA

STUDIO ROBERTO ROVIRA

ROBERTO ROVIRA

Could you talk a bit about your studio's process and philosophy?

Our studio operates at the intersection of landscape architecture, art, and technology. We view landscape's innate lack of resolution and inexactness as strengths. Our work strives to engage the in-between, the ephemeral, and the passing, and we embrace a mode of practice that alternates between art and design as essential methods of inquiry.

Do you have a recent project that you are particularly excited about?

One of the projects about which we are most excited is our Ecological Atlas, which attempts to simplify the visualization and understanding of the natural world. By using intuitive, graphic mappings that can convey changes in bloom times, deciduous tree patterns, produce seasonality, animal migrations, and other time-dependent phenomena, the Ecological Atlas facilitates a comprehensive understanding of the natural world in ways that are essential to building a sustainable and resilient future. It bridges art, science, and design, and connects the power of data and technology to the rich complexity of natural systems.



COURTESY GELPI PROJECTS

GELPI PROJECTS

NICK GELPI

How does your practice's ideology manifest through your projects?

We are a design practice dedicated to examining the material relationships of building concepts by focusing on the collisions between materials and representation.

In years past, faced with a lack of clients, our focus was primarily design as research, engaging materials as a type of sparring partner...bending, testing, and manipulating basic materials looking for new design potentials through feedback. Recently we have had the opportunity to build buildings, so we have tried to engage materials and details as a way of destabilizing basic assumptions about design and

construction. We strive to engage construction itself as a culturally transformative act.

What trends should everybody be watching for in Florida?

In Florida, one must be concerned with where the water is. The built environment here is always considered in terms of its proximity to the water. The opening of the Pérez Art Museum in Miami illustrated new potentials for articulating the edge between the interior and the exterior space, and also for the positioning of the building in relationship to the Biscayne Bay. The museum seemed to revive historic examples of vernacular architectures for addressing these concerns, drawing from references including an old community of buildings actually built out in the bay, called Stiltsville.



COURTESY JOHN STUART

No architecture center can expand beyond local limits and become an international magnate for creative practice unless it has a strong university research component bringing new people in the profession. The two major architecture schools in South Florida, Florida International University and the University of Miami, have created such centers in the last five years. Here we take a brief look at these facilities:

RAD LAB

RAD-UM at the University of Miami is one of the most creative and productive research initiatives in an architecture school today. The concept for the lab is the creation of Dean Rodolphe el-Khoury who has migrated the lab from his academic positions at the University of Toronto (where the lab continues) and California College of the Arts in San Francisco. El-Khoury has developed and refined this experimental studio beyond the normal closed



COURTESY JOHN STUART

university studios into one the most important and productive research centers in the country

It has been commonly accepted in academia and advanced sectors of the design profession that the future of computing is not in static table-top machines, but embedded in objects that surround our daily life like a Nest Thermostat or lighting that senses the presence or absence of people in a room.

RAD-UM has taken this reality of our changing relationship with technology and asked design researchers and students to imagine its potential and real effects on our public and private spaces. For their first project, Bio-Reactor, they created a set of

acrylic shelves with LED-lit algae jars. According to the website,

"Each LED can be individually controlled and thus, through photosynthesis, the rate of growth of the algae in each jar and subsequently, the density and color of each jar, can be controlled." It is a beautiful low-resolution display and el-Khoury believes it will have an more important long-term effect for living walls.

THE MIAMI BEACH URBAN STUDIOS

The Miami Beach Urban Studios is a research center on Lincoln Road that brings together faculty, students, and outside collaborators from seven different disciplines in

art, design, and technology. The studio's executive director John Stuart described it as "the love child produced by a wild night of beach partying with the MIT Media Lab and the Wexner Center at Ohio State University." "If you want to see the creative soul of these other universities," Stuart continued, "you need to know what these research centers are doing—it's the same with our lab and Florida International University." Stuart thinks of the facility as a "connector or collider" where often disparate disciplines meet at the center's unique 3-D printer—the largest in the world.

The lab has 3-D-printed large-format images of a Morris Lapidus building in Miami Beach and multiple projects profiling potential scenarios and the effects of sea level rise on the community. A final project that demonstrates the diverse collaborators in the lab is a 3-D printed violin for students and veterans with prosthetics limbs. This project joined together representatives from the lab's Human Sensation project with the FIU Adaptive Neural Systems Lab, the High Performance Database Research Center, the FIU VizLab, Venture Hive, Rokk3r Labs, and the World Council of Peoples for the United Nations. **WM**



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COURTESY CHIP LORD

ANT FARM'S CHIP LORD TURNS HIS SIGHTS ON MIAMI FOR HIS LATEST INSTALLMENT OF SEA-LEVEL RISE DOCUMENTARIES.

A THIRD UNDERWATER

Video artist Chip Lord has made a career of pointing his lens at subjects he both admires and dislikes. In his early Sony Portapak experiments with the collectives Ant Farm, T.R. Uthco and TVTV, he critiqued, but had fun with American subjects like car design, the Kennedy assassination, television news, and domestic habitation. His 1972 Ant Farm-designed House of the Century on Mojo Lake, Texas, both sends up the idea of a playful weekend party house in its male body design and the site of an installation of television monitors slithering out of the lake into the property of the house.

Today, Lord is creating video works that bring his architect-trained sensibility to various cities facing issues of sustainability and rising sea levels including *Venice*

Underwater, *New York Underwater* and next year a project about Phoenix, Arizona. Now he has created an urban portrait of the American city most immediately facing the issues of rising tides: Miami Beach. His *Miami Beach Elegy* focuses on the massive investment required to keep the city above water both for residents and its important tourist industry. The video focuses on the physical investment required to maintain the sea level metropolis—like a child building a sand castle that is wiped away by the tide, and a jolly convention of real estate agents as they celebrate selling property in a sinking city. *Miami Beach Elegy* will premiere at the Rena Bransten Gallery in San Francisco later this year. A brief trailer of the film will be available soon on Vimeo. **WM**

PRISON REFORM continued from page 15 package the State of Florida called Project Assassin, which was later rescinded). The newly reimagined facility opens its doors to the untrained hobbyist and gun enthusiast. Public programming requires no military training or law-enforcement credentials—passing a criminal background check and paying the entry fee gains entry to select courses. In one recent example, students from every walk of life spent a Saturday learning to shoot targets near the former prison law library from hovering helicopters. This is a mom-and-pop shop for street-front shoot-'em-ups. This is amateur hour. And it may only be the beginning, a model for the private security urbanism to come.

To better understand the draw of the site, one must understand remoteness as a fundamental asset of the new private security urbanism. The state has historically invested in remote areas for detention purposes, using distance from populated centers as a buffer. Built in 1977 to be intentionally surrounded by uninhabited wilderness, the facility had been deteriorating for decades. The required public funding for renovations and remote access had become a burden to the State of Florida. The once-desired remoteness proved to only expedite the prison's eventual demise, but later offered an opportunity for other uses—allowing for the

type of training other non-remote sites cannot.

The details of the training contracts are confidential, but one can imagine the series of exfiltration and other tactical operations that this type of location affords. As other military installations are spending money to faithfully recreate every physical nuance of projected intervention sites from scratch, Altair comes ready-made with a bona fide architecture of imprisonment. The former prison and its buildings, no longer capable of sustaining prior instantiations of security, are now seen as "up for grabs"—a kind of marketable good, repurposed to the whims of the new securocratic order.

It takes a mind with a particular type of calculus to understand the high value of civic remnants in the oncoming era. While the standard of real estate development speculation looks for new density and economic growth opportunities, these alternative post-urban investment schemes search for forgotten ghost spaces, where remoteness and absence of human habitation are the prized components. Given the rampant privatization of the prison-industrial complex, abandoned state prisons could soon be a boon to the speculative rehabber of disused security infrastructure. The architecture of incarceration is offered as a stage set, perpetuating its imagined use.

ERSELA KRIPA AND STEPHEN MUELLER/AGENCY



Tadao Ando / 152 Elizabeth St.

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Long Dock Park & River Center, Beacon, NY
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Central Synagogue Restoration, 2001
Architect: Hardy Holzman Pfeiffer
CM: F.J. Sciam Construction



New York City Center, 2011 | New York, New York
Architect: Ennead Architects | CM: F.J. Sciam Construction
Photo Credit: Aislinn Weidale/Ennead Architects



The Abraham Joshua Heschel School, New York, NY
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IT IS HARD TO TALK ABOUT FLORIDA WITHOUT MENTIONING THE MIAMI REGION. IN SOME WAYS, IT IS THE ULTIMATE COASTAL CITY: MILES OF BEAUTIFUL BEACHES AND A SYSTEM OF INLAND WATERWAYS CREATE A TROPICAL PLAYGROUND IN A COMPLICATED METROPOLIS WITH MANY LAYERS. THIS JUXTAPOSITION CREATES AN UNUSUAL AND FASCINATING PLACE. WE LOOKED INTO SOME OF THE TOPICS THAT ARE MOST PRESSING FOR SOUTH FLORIDA AS IT CONTINUES TO GROW IN UNEXPECTED WAYS.

SEA LEVEL RISE

IT IS NOT ENTIRELY CLEAR WHAT THE FUTURE HOLDS FOR SOUTH FLORIDA: WILL IT SINK OR SWIM? AND HOW IS THIS AFFECTING WHAT ARCHITECTS AND PLANNERS ARE DOING IN THE REGION?

The moon over South Florida looked like a swollen grapefruit in November, its reflection rippling off pools of ocean water that bubbled up through storm drains, crept over seawalls, and swallowed Miami streets. It was a “supermoon,” about 17,000 miles closer to Earth than usual, according to NASA, arriving

just in time to supercharge the seasonal high waters known as king tides.

The water made an island out of the life-guard’s shack on Matheson Hammock Park, swept “No Wake” signs from marina harbors onto city streets, and marooned a live octopus in a parking garage along Biscayne Bay.

On days like these, it’s obvious that much of the region now home to about 7 million people began as a network of swampy canals meandering from the Everglades to the ocean. Sometimes nature conspires to remind the city of this fact, as it did in November 2016.

Lately those reminders have become more frequent. The rate of sea-level rise has tripled over the last decade, according to a recent study from the University of Miami, bringing with it more frequent coastal flooding. The U.S. Army Corps of Engineers projects that Miami-Dade County will see about 15 inches of sea-level rise by 2045. And because South Florida sits on porous limestone bedrock, saltwater is not just encroaching on coastal communities, but gurgling up from below.

Right now it’s a nuisance, but over the lifetime of a mortgage, flooding in South Florida could threaten tens of billions of dollars of real estate and upend development in the country’s 10th largest metropolitan area. Architects, planners, and developers are just beginning to overhaul the urban landscape, laying the groundwork for a sweeping transformation of building codes, municipal infrastructure, and design norms that could save the city from rising seas.

The crucial question is: Who will change that built environment? Will it be architects and city officials, safeguarding South Florida against the effects of climate change as the world’s living laboratory for so-called climate resiliency? Or is nature coming to reclaim Miami as a swampland?

THE ARCHITECT'S NEWSPAPER APRIL 1, 2017

Previous page: “Nothing in the next 100 years is going to change South Florida’s built environment more than climate change,” said Jeff Huber of Florida Atlantic University, who has been studying the North Beach Village in Fort Lauderdale, which lacks public infrastructure, but has some of the best examples of Floridian mid-century modernism.

Right: King tide events often cause flooding in areas where there was not significant flooding in the past. It is unclear what will happen if these sea-level rise–related events keep happening with increasing intensity and frequency.

HIGHER GROUND

South Florida’s development boom is so lucrative it seems inevitable that it will continue. Before the city was founded in 1896, however, it wasn’t clear that the mouth of the Miami River would ever be anything more than a mosquito-infested trading post—until the industrialist Henry Flagler dragged his railroad south from Palm Beach along the highest ground he could find: a coral ridge between 12 and 25 feet above sea level. The tracks reached Biscayne Bay on April 22, 1896. Three months later Miami was incorporated.

Today, Miami is a bustling, sprawling urban landscape that has been remade to suit cars, but some planners say that the same limestone ridge Flagler used could anchor climate-friendly development.

The Urban Land Institute is drafting a plan for the Arch Creek Basin, a mostly low-lying area straddling 2,800 acres and four municipalities, as well as unincorporated Dade County, around one stretch of the railroad. Primarily poor people of color, the residents of Arch Creek face a severe threat from sea-level rise—one that could eventually force them to abandon the area. The development would be flood-resistant and transit-oriented, dense with mixed-use buildings and affordable housing, but also with a health clinic, backup generators, and other resources that could come in handy during disasters.

In the long run, South Florida’s scarcity of higher ground could also make its elevated areas more valuable as waters rise. That could exacerbate gentrification in minority neighborhoods with relatively high elevations like Liberty City and Little Havana.

“It’s a matter of time until investors will head for the higher land,” said James Murley, chief resilience officer for Miami-Dade County. But climate change isn’t forcing people out of their homes just yet. Asked if climate change is a driving force for gentrification in Miami, Murley is skeptical, but others are starting to look toward the future.



COURTESY CITY OF FORT LAUDERDALE + FLORIDA ATLANTIC UNIVERSITY SCHOOL OF ARCHITECTURE

PLANNING FOR HIGH WATER

Over the next five years, the municipality of Miami Beach will spend \$400 to \$500 million on flood defenses, installing 80 new pumps, raising roads, and strengthening seawalls across the city. So far the city has funded about \$200 million of that project by more than doubling stormwater fees.

A law passed last year requires the owners of buildings larger than 7,000 square feet to pay a fee if they don’t get certified as at least LEED Gold. The builders of properties that don’t get LEED certified at all get slapped with a fee equal to 5 percent of their construction costs. That could help raise money for future infrastructure investments.

Miami Beach also requires new buildings to be at least one foot above the base flood elevation of six feet above sea level. As an additional incentive for developers, the city won’t count the raised elevation of a flood-proofed site toward the project’s height limit or floor-to-area ratio.

Miami Beach environment and sustainability director Elizabeth Wheaton said the new requirements wouldn’t stunt development.

“Developers want to build here,” Wheaton said. “They’re going to do what’s required.”

The first building completed under the new elevation requirements is Jean Nouvel’s Monad Terrace, a 59-unit luxury residential tower on the waterfront in South Beach. Nouvel built Monad Terrace’s ground floor more than 11 feet above sea level, elevating all of the building’s

interior spaces and its entrance high enough to ward off flooding.

Building high is an increasingly popular choice for private residences, too. The local architect Rene Gonzalez, known for his high-end modernist houses, is building four new homes in the area that are modeled on mangroves—propped up with stilts and columns for an additional layer of privacy that also affords the owner some long-term insurance against flooding. Gonzalez designed his own home on Belle Isle the same way.

“It’s a responsibility that every architect should take on,” said Gonzalez. “Building a house up is not a luxury. It’s a necessity in our current environmental climate.”

For now, however, most of that work is clustered in tony Miami Beach. In Miami-Dade County at large, where nearly half of all residents live in poverty, there are fewer options.

Because saltwater rises up through South Florida’s porous limestone bedrock, it’s not just coastal communities that are at risk. Many of the most threatened areas lie miles inland, in suburban and often low-income areas of Miami-Dade and Broward County that can’t afford to elevate all their homes and streets.

“It’s unavoidable that there will be relocations,” said Anthony Abbate, an architect based in Fort Lauderdale in Broward County, just to the north of Miami-Dade. “It’s a difficult conversation but I think we’re on the verge of having it. This has to be a conversation with the people, with the public.”

RISK AND REWARD

Perhaps before it faces up to the force of nature, however, South Florida may have to reckon with its runaway real estate market. Wayne Pathman, a land-use attorney and chair of Miami’s Sea Level Rise Committee, said the face of Miami’s climate crisis might not be a natural disaster, but a collapse of the insurance market.

“Flood insurance is going to be the tip of the spear,” Pathman said. “Unlike hurricanes, which are a single event that may not happen for years at a time, sea-level rise is a constant. Once it’s here, it’s here, and it’s never going to get better.”

Pathman said some of his clients with property in Miami Beach and North Beach are already seeing a 500 percent increase in their flood-insurance premiums. For now, that’s manageable, he said, because they were probably underpriced in the first place.

“When that jumps as high as \$50,000 over the next 10 years, which it will, that’s alarming,” he said.

Areas that today flood two or three times each year could see water in the streets every week, and banks may stop offering mortgages there. That could have ripple effects across the region, Pathman said, jeopardizing tourism dollars and property-tax revenue that Miami-Dade and Broward counties will need to fund new climate-resilient infrastructure.

“Those are our only two industries here in South Florida,” Pathman said. “If we don’t start dealing with

the insurance risk, all the ideas we come up with for future infrastructure will be cost-prohibitive because we won’t have any money.”

Reinaldo Borges, an architect who sits on the sea-level rise committee with Pathman, said the luxury houses and museums already built to deal with higher seas show climate-resilient design can provide a return on investment.

“If you design correctly,” he said, “you shouldn’t be worried about insurance risk.”

Borges has a checklist for clients who are looking to invest in the future of Miami real estate—not just flip property for a profit. It includes elevating building mechanical systems, installing hurricane-proof windows, and planning for severe floods.

“For a building like that, all you have to do before a storm is bring your pool chairs inside,” he said.

Climate-proofing one building may be a straightforward design problem. Saving a metro region of 7 million is something else.

Borges came to Miami when he was six years old, brought from Cuba by parents who sought a better life for their children. Today he has two daughters, ages 23 and 29, and he has the same hope for them.

“When you’ve got political leadership in denial, these are challenges I’m concerned about,” said Borges. “This is a world-class city, but people are starting to ask if this is the place they really want to invest.”

CHRIS BENTLEY



THIS IMAGE: JIMMY BAIKOVICUS/FICKR; BOTTOM IMAGE: DANIEL CHRISTENSEN/WIKIMEDIA COMMONS

Left: The 1939 Colony Hotel is located in the art deco district of South Beach.

Below: The Barcardi Building was designed by Cuban architect Enrique Gutierrez in 1963 (See page 78 to learn more about Barcardi's architecture).

ARCHITECTURAL HERITAGE

MIAMI EMBODIES CHALLENGING STEREOTYPES, BUT GENERATES NEW IDENTITIES IN SPITE OF THEM.

There are facts about Miami that challenge the American narrative on what it means to be an American, like the fact that most Miamians—documented and undocumented—have been Americans their entire lives, just more southerly located; one of the city's major arteries is Calle Ocho (US-41), which starts at the Atlantic Ocean in Downtown Miami, stretches into the upper peninsula of Michigan, turning into a cul-de-sac, wrapping around itself

and splitting the United States in two; and English has never been an official language of the United States, most evident in Miami's creation of Spanglish. Perhaps no other interpretation can locate the problem of Miami as a most American object.

Miami is blown-out, teetering over the line of acceptable, into the realm of the incredible and back again in an instance so fleeting it can only be described in ephemeral

anecdotes. Yet within this feeling there is permanence, textures embedded within the sidewalk Cuban-coffee windows, the Haitian barbecue in parking lots, the unspecified graffiti facades of new buildings, the bridge-cities connecting synthetic earth to eroding beaches, color and light used as generators for architecture, and ultimately in the multi-versed language of formalities spoken by the beautiful people of this sprawled-

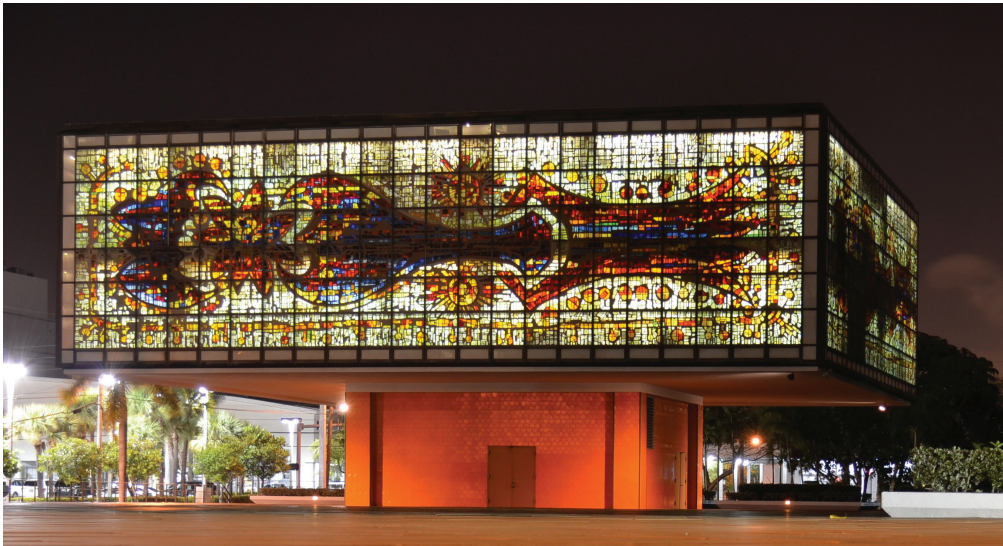
out, horizontal Tower of Babel.

As a capital of the end and beginning of the world, Miami's architecture is fitting. From its colonial past through its cracker style, to its New Deal modern and art deco internationalist explosion, Miami has been equal parts parking lot and low-key laboratory for designers. Like Los Angeles, Miami had its own variation on postmodernism, thanks to unforgettable work by Arquitectonica, such as Pink House and the Atlantis; Roney Mateu's 1984 radical, steel-and-glass Luminaire building that challenged Coral Gables' small, terra-cotta city fabric; and Philip Johnson's Miami Cultural Center, where one might have "Jammed at the M.A.M." (before it became PAMM). This period saw Miami's most prolific cocaine-funded densification, only surpassed more recently with unfettered safe-deposit-box towers dotting the skyline. Over the last 20 years, Miami has been equally critiqued for its lack of resiliency in sustainability and celebrated as an innovative south-eastern center. One lesson from this contradiction is that Miami has always been both, inhabiting challenging stereotypes, while projecting new identities in spite of them.

But Miami's architecture translates some of these conditions visually, through instances of drive-by-sidewalk cultures and mediated facades; coloration as a strategy for architecture; and resilient bridge-citiescapes. Since it's unproductive to attempt a meager definition of everything in Miami, perhaps then the projection of new genealogies through its architecture might make it more worthwhile.

A new species of architectural element has exploded in Miami: the mediated facade. That is to say that the facade—technocratic, ornamental, relaxed, absent, and otherwise—has had a very sympathetic, albeit aesthetically allergic, ear within the history of Miami thanks to capital, climate, and culture. For example, expressive and gigantic graphics found their origins during modernism in the tile facades famously capping the sides of Enrique Gutierrez's Bacardi Building and on Roberto Burle Marx's sidewalk pavers, both located on Biscayne Boulevard. The mediated facade is different because it is divorced from its traditional place within the elements of architecture and the design process, more specifically in a planned loss of control for the architect. The facade in Miami began to operate differently in the Design District in the early-to-mid 2000s with an origin in Rene Gonzalez's CIFO Art Museum. Using one million Bisazza glass mosaic tiles to represent a jungle scenography, Gonzalez harnessed postmodern communication to flatly rasterize the historical tectonic gymnastics of facades in Miami without resorting to a metaphoric translation of vegetation. However, that jungle image at CIFO not only transformed the reception of facades in the Design District via swift driving, tight parking, and slow walking, but also the transparencies and porosities of Miami's more acceptable architectural faces.

In Wynwood, a low-resolution high-participation version of the mediated facade has taken the form of almost-bare frontal surface treatments by architects, turning the sidewalk into an outdoor lowbrow museum stroll. By leaving facades stark, architects are giving up aesthetic control and expression for a more localized collaboration, usually with painters, artists, and graffiti writers, to fill in the gap between neighborhood and interior. The result is a multivalent series of streetscapes, corridors, alleyways, and entrance sequences that extend art both into the facade-driven traditions of architecture and the urban interior, accessible when it doesn't rain. **ANDREW SANTA LUCIA**



LUXURY CONDOS

A POST-RECESSION CONDO BOOM IS MORE THAN JUST A BUNCH OF HOUSING UNITS

Miami has a certain glitzy, glamorous character unique to its shores and streets. In recent years, the tropical climate and Latin flair have brought an influx of foreign investment and international attention. South Beach, the Design District, and events like Art Basel Miami Beach and Design Miami/ have attracted not only a moneyed crowd of beach goers, but one that—in a new wave of spending and development—not only wants nice things, but cool things. This new attitude about art and design as an essential element of luxury has spawned a wave of condo projects that incorporate “starchitects” as part of the sales pitch—from Rem Koolhaas and Zaha Hadid to Isay Weinfeld and Renzo Piano.

“Having an extremely high caliber of art, design, and architecture elevates the entire property to a work of art itself. This creates timeless value that speaks to a very niche type of buyer and has the ability to supersede shifts in the market,” Edgardo Defortuna, founder and president of Fortune International Group, said.

Many of the condo projects are based on the old hotel-apartment model, where the most affluent guests would simply live in a resort. But today private, all-residence buildings come equipped with all the amenities of a Florida resort, and then some.

Take a look at the latest batch of residential towers:



COURTESY DBOX

THE TOWERS BY FOSTER + PARTNERS 1201 BRICKELL BAY DRIVE, MIAMI

Architect: Foster + Partners
Status: Approved
Units: 660
Floors: Unknown

Announced in November 2016, this 1,049-foot-tall building got FAA clearance and is poised to be one of the tallest towers in Miami—it could be the city’s first completed supertall. Parking will be submerged and it will feature 56,000 square feet of open space at ground level, including a through-block arcade.



COURTESY SLS BRICKELL

SLS BRICKELL HOTEL AND RESIDENCES 1300 SOUTH MIAMI AVENUE, MIAMI

Architect: Arquitectonica
Status: Completed 2016
Units: 124
Floors: 55

This combination condo tower and hotel features an iconic mural on its exterior, painted by Brooklyn-based artist Markus Linnenbrink. The hotel interiors are designed by Philippe Starck and the tower is host to Bazaar Mar by Chef José Andrés, a tile-clad seafood joint (Take a closer look on page 6).



© TERRA GROUP/ RELATED GROUP

JADE SIGNATURE 16901 COLLINS AVENUE, SUNNY ISLES BEACH

Architect: Herzog & de Meuron
Status: Under construction
Units: 192
Floors: 57

Every inch of this Sunny Isles Beach tower is designed, from concrete skylights in the common areas to the double height “Sky Villas” just below the \$32.9 million penthouse.



COURTESY ZAHA HADID ARCHITECTS

ONE THOUSAND MUSEUM 1000 BISCAYNE BOULEVARD, MIAMI

Architect: Zaha Hadid Architects (ZHA)
Status: Under construction
Floors: 62
Units: 83

The layouts of the units change as this massive sculptural facade (page 13) weaves its way up the structure. At 709 feet, it will be the tallest ZHA project to date and one of Miami’s altitudinous when completed.



COURTESY TERRA GROUP

EIGHTY SEVEN PARK 8701 COLLINS AVENUE, SURFSIDE

Architect: Renzo Piano Building Workshop with West 8
Status: Under construction
Units: 68
Floors: 16

After controversially razing Morris Lapidus’s Biltmore Terrace Hotel, the developers at Eighty Seven Park not only enlisted Renzo Piano to do the building, but they also tapped West 8 to landscape a 35-acre, public oceanfront park.



COURTESY RICHARD MEIER + PARTNERS

THE SURF CLUB | FOUR SEASONS HOTEL & PRIVATE RESIDENCES 9011 COLLINS AVENUE, MIAMI

Architect: Richard Meier + Partners
Status: Under construction
Units: 150 residences
Floors: 12

The historic Surf Club is one of the most famous low-rise hotels in Miami Beach. It is being converted into a large block of residences, but will include 77 hotel rooms. Parts of the old resort will be saved, including the ballroom, which will become the new reception area.



COURTESY TERRA GROUP

GROVE AT GRAND BAY 2675 SOUTH BAYSHORE DR, MIAMI

Architect: Bjarke Ingels Group (BIG)
Status: Completed 2016
Units: 96
Floors: 20

This spiraling stack’s structure is left exposed with raw concrete columns that slightly lean askance. The concrete floor plates are also exposed and a lush garden by Raymond Jungles complements the canopy and planters made of concrete, which Jungles called “the natural stone of South Florida.”



COURTESY HERZOG + DE MEURON

ONE PARK GROVE 2701 SOUTH BAYSHORE DRIVE, MIAMI

Architect: OMA
Status: Under construction
Units: 54
Floors: 20

Three towers are rising on the Coconut Grove Bank site, where a charming mid-century bank will be demolished and replaced by a new, OMA-designed facility as part of the area’s makeover. The project also includes performance spaces on the ground level. OMA won a high-profile competition for the project, beating Diller Scofidio & Renfro, Christian de Portzamparc, and Atelier Jean Nouvel.



COURTESY FASANO MIAMI BEACH

FASANO MIAMI BEACH 1901 COLLINS AVENUE, MIAMI BEACH

Architect: Isay Weinfeld
Status: Approved
Units: 67 residences
Floors: 22

The Shore Club has a long history as one of the iconic hotels on South Beach. This stylish renovation—by HFZ Capital—will convert the hotel into condos, but the public pool and hotel spaces will remain under the label of Brazilian hospitality superstars Fasano. The pool will be surrounded by five two-story beach homes.



COURTESY ALL ABOARD FLORIDA

TRANSPORT INFRASTRUCTURE

MIAMI'S INFRASTRUCTURE WOES RUN DEEP, BUT THE CITY HAS ITS EYES SET ON "HUGE CULTURAL CHANGE"

Talk of "infrastructure" may be one of the few things—if not the only thing—that comes close to uniting Democrats and Republicans at the moment. It was transit infrastructure, of course, that

literally united the states of America: originally with railroads in the 19th century and later with interstates and automobiles in the 20th. Today, however, some cities' prevailing love affairs with the

car have become rather one-sided.

Polluting air and clogging roads, vehicles choke our cities. Miami ranks fifth nationally and tenth globally for congestion, as residents spend 65 hours in traffic per year

on average, according to INRIX, a global traffic researcher that uses big data. Adding real injury to insult, the state's stretch of the I-95 is America's most deadly, according to statistics from the National High-

way Traffic Safety Administration.

There is a financial burden to excessive traffic too. INRIX estimates that congestion costs Miami drivers \$3.6 billion per year (remember that figure). Additionally, drivers pay out an average of \$628,000 every day in tolls, just for the privilege of using the Miami-Dade Expressway.

Cars aren't cheap, but what is the alternative in an auto-dependent city like Miami? Director of the Department of Transportation and Public Works (DTPW) for Miami-Dade County Alice Bravo said that she wanted to make Miami a "car-optional community," where people can get to "all the different regions within the county using reliable public transit that's convenient and helps people save time."

A plethora of schemes and projects are now occurring in and around the city, such as high-speed regional rail, local rail, bus, bicycle, and pedestrian routes, water travel, and carpooling. Miami has gone from having nothing concrete in the pipeline for years to everything happening at once, and this coincides with a development boom that is more tuned for urban living than previous waves of development. (See page 30 for mega-developments.)

Bravo said that the backbone of the infrastructure surge is the Brightline, a completely private,



COURTESY SMILODON



Above: Two tracks of the local suburban Tri-Rail are on the left and three Brightline rails are on the right.

Below: The Palm Beach station retains the same language SOM employed at both the Miami and Fort Lauderdale stations.

approximately \$3 billion scheme by All Aboard Florida. The “higher-speed” (Note: not high-speed) rail service runs the 235-mile stretch from the Orlando airport to Downtown Miami. The new line will reduce travel between Orlando and Miami from four hours to two and a half, for about the same cost as driving.

Such a commuter-rail service may sound familiar: In the late 19th century, the Florida East Coast Railway (FEC) was developed by Henry Flagler. Flagler’s railway ran from Jacksonville and was dubbed the “eighth wonder of the world.” The commuter rail prevailed until the 1960s when the line was used to transport freight only, which it still does to this day. Unsurprisingly, then, All Aboard Florida is a sister company of the FEC and the new tracks will be laid along the existing lines.

Designing the Miami station, as well as those in Fort Lauderdale and West Palm Beach is Skidmore, Owings & Merrill (SOM). Design principal Roger Duffy explained how the stations would work with the existing infrastructure around them: “At Fort Lauderdale, we’re looking to link up with a bus service that will connect the cruise port and the station.” The city is also pressing on with plans for a streetcar system called “The Wave” that would connect with the station as well.

Meanwhile, at West Palm Beach,

the 60,000-square-foot station is located at the center of downtown and will connect with the existing trolley network as well as Tri-Rail and Amtrak. In Miami, the station inhabits a similar location. A zoning override that turned the area into a special transit district was required to build the station, and tracks here are elevated 50 feet into the air so that the 11,000-foot-long station can bridge roads and pedestrian pathways.

Like any contemporary train terminus, the station will offer a

ton of retail space, with room for a food court too. Duffy, however, stressed that the station was “not like duty-free at an airport,” where you have to weave through shops to get anywhere. Amenities will also cater to the area outside the building. Space for food trucks—a hit in Florida—has been provided, while skylights where the station bridges the streets offer daylight.

Using the Brightline project as a springboard, Bravo is embarking on a \$3.6 billion (remember that number?) transport scheme. Part

of “Strategic Miami Area Rapid Transit,” otherwise known as the S.M.A.R.T. plan, 82 miles of track will be laid along six transportation corridors that involve local services, including the suburban Metrorail and the elevated monorail Metromover.

In addition to new tracks, existing tracks are also finding a new lease on life as a haven for pedestrians and cyclists. Known as the “Underline,” the rails-to-trails scheme, projected to cost between \$7 million and \$9 million,

comes from James Corner Field Operations (JCFO)—the same firm who developed New York’s hugely popular High Line.

As one might guess, the scheme involves area underneath the Metrorail being turned into a landscaped oasis filled with pedestrian paths, cycle lanes, and native planting. The 10-mile stretch is planned to run from Brickell Station down to Dadeland South Station. Phase one is occurring in Brickell, where work is due for completion in 2019. “Brickell has



THIS IMAGE, ABOVE, AND OPPOSITE BELOW: COURTESY SOM

Above: Ten miles of bike and pedestrian trails weave through the city underneath the Metrorail tracks, aiding the densification of Brickell.

Below: Site-specific amenities will be interspersed along the trail. At Brickell (shown), there will be murals and places to wait for the train, as well as a bicycle garage. By the University of Miami, a volleyball sand court is being proposed.

grown explosively in the past 10 to 15 years,” said Meg Daly, president of Friends of the Underline, the group leading the project. “We really believe that this trail-cum-park will offer incredible amenities and green spaces to offset the vertical growth and increased density in the area.”

Expanding on this, Isabel Castilla of JCFO listed amenities such as a dog park, an outdoor gym, a basketball court that doubles up as a space for yoga classes and similar activities, as well as a 150-capacity bicycle garage (Miami-Dade’s first) and a bike repair station. Art will also line the trail, and amenities will be site-specific: In the University of Miami area, a beach volleyball court will be installed.

According to Irene Hegedus of the DTPW, providing safe bicycle routes is a high priority. Castilla added that the shade provided by the Metrorail is “critical” for a project where people are encouraged to “walk, run, and cycle to stations and along the path.” “Working with the existing infrastructure,” she continued, “we hope this leads to the rezoning and re-visioning of areas along the Metrorail as transit-orientated development sites and areas where, as Miami continues to grow, it hopefully grows in a denser way near transit stations rather than continuing urban sprawl that is very dependent on highways and cars.”

Bravo, too, is aware of the interwoven relationship between transit development and the densification of urban areas. Another tool she discussed to further assist Hegedus’s and her ambitions was the possibility of Uber and Lyft entering the fray of her transport plans, acting as the “first and last miles” for journeys.

Now operating in Miami (after three years of lobbying for service legalization), Uber and Lyft previously found success in other parts of Florida, notably in Pinellas Park and Altamonte Springs where rides are subsidized and saving the cities considerable money. Altamonte Springs City Manager Frank Martz described the pilot partnership as “going very well,” but said the scheme is due to end in July.

The low-cost nature of services such as Uber and Lyft is a key to their success. Already able



COURTESY JAMES CORNER FIELD OPERATIONS

to outprice traditional taxi drivers, ridesharing services Uber Pool and Lyft Line are looking to compete with bus service, too. Uber has gone further than mere carpooling by introducing pickup points optimized by algorithms that essentially create Uber bus stops.

Uber is also losing money—approximately \$3 billion per year. In December, economist Justin Wolfers commented that “prices will rise once they’ve succeeded at monopolizing the industry.” If he is correct, the governmental embracing of Uber and Lyft long-term will prove to be shortsighted. Evidence of what happens when alternative public transit routes become unavailable can be seen in London. During a tube strike earlier

this year, Uber fares surged by 450 percent; one rider was reportedly charged \$138 for a five-mile trip.

It should be noted, though, that Altamonte Springs and Pinellas Park went with car sharing due to other circumstances not going their way. The Altamonte Springs city government set aside \$500,000 (of which only a fraction has been needed) for private-hire subsidies after it was denied funding for a \$1.5 million pilot “FlexBus” program. At Pinellas Park, the program emerged in response to a 2014 referendum in which local voters declined to adopt a one-cent sales tax to aid transit in the area.

In Miami, however, residents appear to be more enthusiastic about public transport. The “People’s

Transportation Plan,” a half-penny charter county sales surtax is helping to fund the S.M.A.R.T. project, something the public voted in favor of back in 2002.

All this, too, shouldn’t suggest that Miami is waging all-out war against the automobile. Getting around by car is being made easier by what Bravo calls “smart signals”—traffic signals that adapt to current states of congestion. Using cameras, they monitor intersections and use AI to optimize traffic flow. Miami-Dade County is investing \$40 million this year for the implementation of the traffic signals along major corridors, part of a five-year, \$160 million effort. Other smart-city services include 300 soon-to-be-installed wi-fi transit

hotspots from CIVIQ Smartscapes.

With all the proposed infrastructural plans, varying in scale, Bravo is under no illusions about the difficulty of the task. “This is a huge cultural change,” she said. However, Bravo is optimistic about how future generations will take to the changes. “New millennials are cool about public transportation,” she added. Such unprecedented growth seldom comes around often, and the chance to invest off the back of hefty tax receipts may be fleeting. Miami’s public transit system is dire, but if it continues to ride the wave of public support and enact its plans, change in the form of mobility lies ahead.

JASON SAYER



MEGA-DEVELOPMENTS

MULTIPLE MEGA-DEVELOPMENTS POINT TO A DENSER MIAMI, BUT WHAT IS DRIVING THIS NEW TYPE OF URBANISM?

New York or Los Angeles? These are the two contrasting models of urbanism that Raymond Fort, designer at Miami-based architecture firm Arquitectonica, cites when asked about Miami's future. In New York, numerous walkable neighborhoods—whose density, convenience, and character are major assets—are connected by a robust public transportation system. In Los Angeles, low density and car-oriented urbanism is the norm outside the downtown core (though transit-oriented development has begun to spread in recent years). Many developers working in Miami are clearly enthusiastic about the New York model. However, that future isn't guaranteed: The potential for

car-dominated sprawl and other hybrid models still exist.

Arquitectonica is behind Brickell City Centre, a 5.4-million-square-foot complex of offices, luxury condos, a hotel, and ample retail south of Downtown Miami. Developed by Swire Group, Brickell is one of the many large, mixed-use developments in Miami that signals movement toward density. Phase one opened late last year, and phase two will entail an 80-story mixed-use tower.

Just north of downtown, there's Miami Worldcenter, a 17-million-square-foot, 27-acre complex. It's a joint venture by multiple developers, with Boston-based Elkus Manfredi leading the master plan and designing the center's

phase one, which is anchored by a 1-million-square-foot retail podium. Phase two is a \$750 million convention center and hotel.

Development isn't only concentrated in the urban core. About two miles north of Downtown in the Wynwood neighborhood, developer Moishe Mana and Miami-based Zyscovich Architects are poised to build a 9.72-million-square-foot, 23.5-acre development that will feature as many as 3,482 residential units, a mix of retail, office, and cultural programming, as well as an extensive public "Mana Commons" that will cut through the complex's cluster of medium-rise towers. Dubbed Mana Wynwood, it won approvals last September. More like it may be on the way:

In Little Haiti, the Eastside Ridge development will replace 500 townhouses with 7.2 million square feet of mixed-use development, and another project dubbed "Magic City" (also located in Little Haiti) would see an innovation center, business incubator, housing, retail, and other art-entertainment facilities arise across a 15-acre campus.

What's driving all of these major concentrations of development? In part, affluent young professionals across the U.S. are moving to cities seeking walkable, transit-connected neighborhoods, and developers are eager to meet that need. But there are factors unique to Miami. One is the city's zoning: The Miami 21 code, implemented some six and half years ago, has significant parking requirements that incentivize large developments. For example, in dense high-rise areas, the code mandates 1.5 parking spaces per unit. Consequently, smaller projects struggle to meet the logistical and economic challenges of incorporating that much parking into their site. Bigger projects can more easily integrate a parking

The 17-million-square-foot Miami Worldcenter emphasizes pedestrian movement across its 27 acres to benefit its extensive retail programming and connect the project to nearby major developments and neighborhoods. Downtown Miami is located just south of the Worldcenter, while the Miami Arts District lies to the north and the new Brightline MiamiCentral Station is being built to the west.

garage into their lower levels. Furthermore, if a development covers nine contiguous acres, it can qualify for a Special Area Plan, an arrangement that allows developers more flexibility in siting parking and negotiating the rules of Miami 21's form-based code. This maximizes the development's value. Brickell, Mana Wynwood, and the Worldcenter, as well as virtually all of Miami's major developments, are (or have applied for) Special Area Plans.

Miami's geography is also part of the equation. John Stuart, professor of architecture at Florida International University and executive director of its Miami Beach Urban

Top and middle: Developer Moishe Mana was granted a Special Area Plan for his 23.5-acre Wynwood project, which enabled some 2.5 million extra square feet of construction. However, as part of his agreement with the city, he'll pay to bury overhead electrical lines in the neighborhood (a job that could cost up to \$25 million).

Bottom: The Climate Ribbon, a 100,000-square-foot steel-and-glass canopy, covers the pedestrian street that connects Brickell City Centre's hotel, offices, residences, luxury shops, and restaurants.

Studios, explained how wealth from the Caribbean and Central and South America has historically flowed into Miami. "We have this gravitational pull from the south," he said. Affluent people from Chile, Venezuela, and elsewhere come to Miami seeking "these kinds of urban experiences where they're safe, their products are confirmed as authentic, but they're close to their own countries...."

But the city's geography turns from an asset to a risk when one considers the threat of extreme weather and sea-level rise. Miami Beach, which sits a mere four feet above sea level (compared to Miami's six feet), is regularly inundated during king (high) tides and is spending nearly half a billion dollars to raise streets, install pumps, and push back the waters. Faced with such uncertainty, Stuart sees mega-developments as "just overflowing with optimism" and the belief that climate change will be remedied, ameliorated, or far enough away to not warrant significant concern in the near future.

In the shorter term, how Miami 21 and public transportation evolve may be deciding factors in shaping the city. In Wynwood, the City of Miami Planning Department is testing out a new zoning overlay that alleviates parking requirements for developments with smaller units. If Wynwood ceases to become the exception, then dense growth may not be restricted to Special Area Plan developments and the downtown urban core.

This leads to the issue of public transportation. "That's at the core of much of what's fragmenting the city, holding it back economically, socially, culturally," said Stuart. "There's very little opportunity for people who live in a neighborhood they can afford to access other neighborhoods for employment, artistic production, or other means." Miami is in the process of funding and planning an expansion of the Metrorail, the city's aboveground heavy-rail rapid transit system. Eighty-two miles of new rail and six new lines—costing \$3.6 billion—would connect the city's burgeoning neighborhoods with each other and downtown. Complicating the situation are Uber and Lyft, whose low rates can be competitive with

public transportation. Moreover, according to Fort, the prospect of driverless cars adds a new level of uncertainty to major public transportation investment.

A conversation about public transportation and mega-developments must also include the question of affordability. According to a 2016 study from the New York University Furman Center, in Miami "85 percent of recently available rental units were unaffordable to the typical renter household," making the city the least affordable for renters among the country's top 11 metro areas. But there are glimmers of hope: As development moves from the urban core and the waterfront to places like Wynwood, more non-luxury units may come online. Additionally, the city is already taking steps to increase affordable housing stock: A measure passed in late February would reward residential projects that feature affordable units with greater density and less required parking. However, while the downtown core and Wynwood don't have large existing communities facing gentrification, that challenge may arise elsewhere. In other instances, density alone may deter development: Earlier this year, local opposition stopped a 1.2-million-square-foot Special Area Plan development east of Little Haiti.

For a firsthand experience, Fort recommends riding the Metrorail to survey the city—from there, you can see pockets of development (Coconut Grove, Little Havana, Brickell, Downtown) that he thinks could become medium-density nodes in a new polycentric city. He also cites neighborhoods like Edgewater, Wynwood, and the Design District that aren't on the Metrorail but are still growing. "That's what I think the next phase of development in Miami is," he said, "where we look at neighborhoods and understand what's missing" to make them mixed-use, denser, and affordable. Optimism for density, however, is just one of many factors—climate change, transportation technology, affordability, and zoning codes, to name a few—that will shape Miami in the years to come.

ZACHARY EDELSON



COURTESY MANA MYNWOOD



MIKE KELLEY PHOTOGRAPHY



MITCHELL ZACHS

URBAN ACTIVISM

WORKING-CLASS NEIGHBORHOODS AROUND MIAMI ORGANIZE TO REJECT GENTRIFICATION

Across Miami-Dade County, organizations like Miami Homes For All (MHFA), Struggle for Miami's Affordable and Sustainable Housing (SMASH), Miami's People Acting for Community Together (PACT), and Fanm Ayisyen nan Miyami (FANM), among others, have been instrumental in launching affordability campaigns across threatened and economically distressed neighborhoods. In the process, these groups are lending a voice to many of the Miami working-class communities as the forces of gentrification and luxury development rewrite the region's urban fabric.

Miami real estate is booming but in all the wrong ways. A recent flowering of luxury-condominium development coupled with a surging population and decades' worth of under-building have pushed rents sky-high. Miami's growing urban core—especially the neighborhoods of Brickell, Overtown, and Wynwood—are beginning to push past their traditional neighborhood boundaries, destabilizing surrounding communities. According to the 2016 *Housing Miami Together* report compiled by MHFA, an advocacy group dedicated to alleviating local poverty, Miami has the nation's highest percentage of rent-burdened households. In response, advocates are pushing

for increased development of affordable housing units and for mixed-income and transit-oriented developments across the region.

MHFA held a special housing summit in 2016 that spawned the aforementioned report. The conference led to increased efforts by groups like nonprofit housing developer South Florida Community Development Corporation (SFCDC) and PACT, a direct-action organization made up of religious congregations and groups, to push the county to implement a slate of pro-affordability reforms. The groups were instrumental in getting the county to establish an Affordable Housing Trust Fund that would be used to harness additional resources for new affordable units. The county contributes 25 percent of proceeds from certain county-owned land sales to the fund, which itself dedicates 50 percent of overall resources toward the development of very low- and extremely low-income housing. MHFA also provides Section 8 project-based vouchers through the Miami-Dade County Public Housing and Community Development Department in order to embed Section 8 housing in market-rate developments.

MHFA executive director Barbara Ibarra said, "We treat homelessness as a part of the affordability crisis,"

adding that her group is focused on what is referred to as a "continuum of housing" that spans from the market-rate sector to various other income-defined groups, including formerly homeless individuals. Ibarra explained that MHFA is working, broadly speaking, to expand the prevalence of mixed-income communities across the Miami-Dade County area. She added, "It's frustrating to see luxury development going on without any forethought being put to housing for people who take care of and work in those buildings. [Developers] have not been building housing for them."

And it shows. A big problem in the rental market due to the apartment shortage has been the rise in slumlord-controlled properties. Adrian Madriz, project leader at SMASH, an initiative within the Center for Social Change, said, "Our organization seeks to smash the slumlords that target Liberty City and Overtown. They are grossly negligent and keep buildings in woeful disrepair." The group's program in those neighborhoods has seized properties from area slumlords and converted them to community ownership via a community land trust. The units are ultimately renovated as affordable housing and rent-to-own properties. Madriz added, "People are being priced out of decent living

conditions. They're being forced to live in places with cheaper rents in properties that are in worse repair."

SMASH is currently working on two housing projects and is looking to develop emergency housing solutions for residents removed from extremely dilapidated or unsafe living conditions. For the latter effort, SMASH is looking to modular, shipping-container, or prefabricated building systems to increase housing availability substantially. Madriz explained that certain shipping-container designs can be engineered to be stronger than typical Type-V construction, an important consideration in the hurricane-prone region.

Developers, advocates, and city agencies are also working to implement a mix of so-called "2-percent fixes" like density bonuses for inclusionary housing, relaxed parking requirements, and upzoning measures. The measures individually boost housing production slightly and when taken together can make for sizable shifts in housing affordability. Regional partners are using these measures in order to incentivize the development of more deed-restricted affordable and less expensive market-rate units.

Miami-Dade is currently redeveloping the Liberty Square public housing projects in North Miami. Seven hundred existing

units will be rebuilt as a 1,500-unit mixed-income, mixed-use community by developer Related Urban Development Group. Alberto Milo Jr., principal and senior vice president, said, "There has been a void in the development of workforce housing within the City of Miami," adding that too many projects are "being developed with either all low-income or all market-rate units, but nothing in between." Related's growing portfolio in the region will include increasing amounts of mixed-income housing to take advantage of new incentives aimed at increasing affordable resources via mixed-income developments. When asked about whether mixed-income developments can relieve pressure on Miami's historic working-class neighborhoods, Milo explained that they "are essential to the long-term viability of these lower-income neighborhoods, and will give quality housing choices to many working individuals and families."

Ibarra also supports the idea, and described expanding the inclusion of low-income housing units in transit-oriented development across the city as "very critical" to maintaining affordability.

In many ways, the emerging mixed-use and transit-oriented trends pit developers and newcomers focused on a vision for a denser, transit-accessible—and, potentially, more equitable—Miami against longtime residents increasingly being priced out of their own neighborhoods. The sentiment led the neighborhood of Little Haiti on the city's north end to fight for official city designation as developer Cho Dragon Management and architects Arquitectonica pursue a new 15-acre "innovation district" there. The \$1 billion project aims to bring a 30,000-square-foot coworking space, a sculpture garden, and a 15,000-square-foot innovation center to the neighborhood. The problem is that new developers working in the area have taken to branding their projects after the historical moniker Magic City, a designation taken from a time before the neighborhood was populated by Haitian immigrants. FANM, an organization in Little Haiti that works to empower and deliver social services to Haitian women, recently worked to get the Little Haiti neighborhood officially designated by the city. The fear among the Haitian population is that as development moves in, Little Haiti will be wiped from the map.

FANM's efforts paid off when the city council voted to approve the designation. At the meeting, Marleine Bastien, executive director of FANM, said, "We are elated. Now no one can come and erase the name of Little Haiti. If this decision was not made today, in a few years Little Haiti would disappear." **ANTONIO PACHECO**

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TECTONIC

HARMONIC

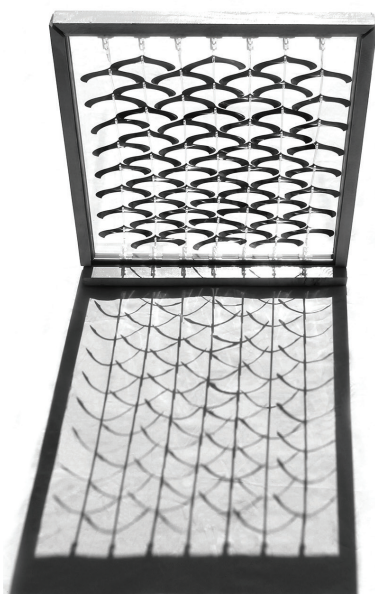
In 1958, office employees at the Mies van der Rohe-designed Seagram Building were given three options for the positioning of their operable window blinds: open, closed, or 50 percent. Today, architects are collaborating with engineers, manufacturers, and installers to develop responsive building envelopes that improve indoor environmental quality while maximizing energy efficiency.

THESE WALLS THEY ARE A-CHANGIN'

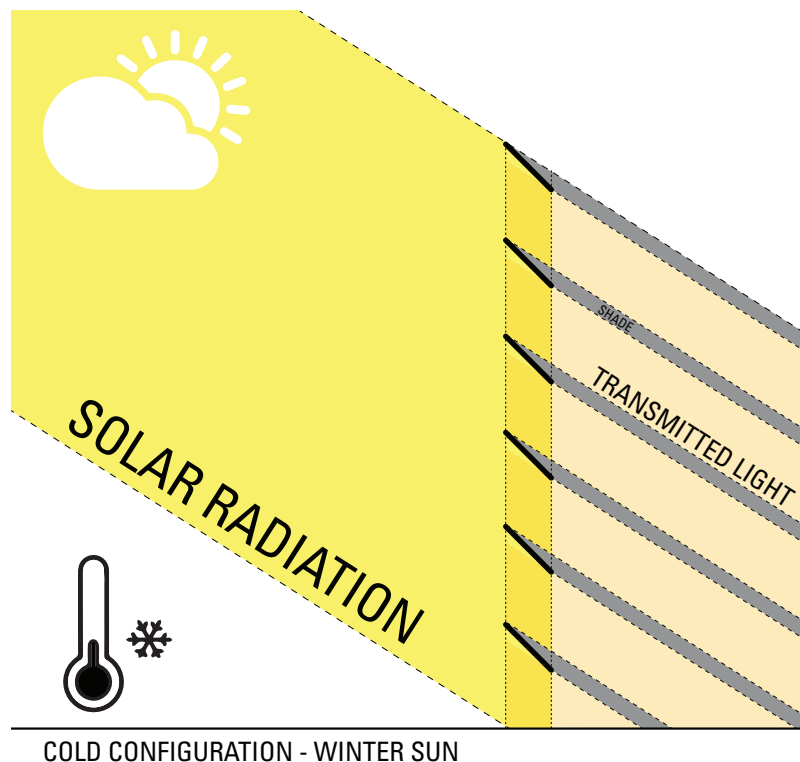
BY JOHN STOUGHTON



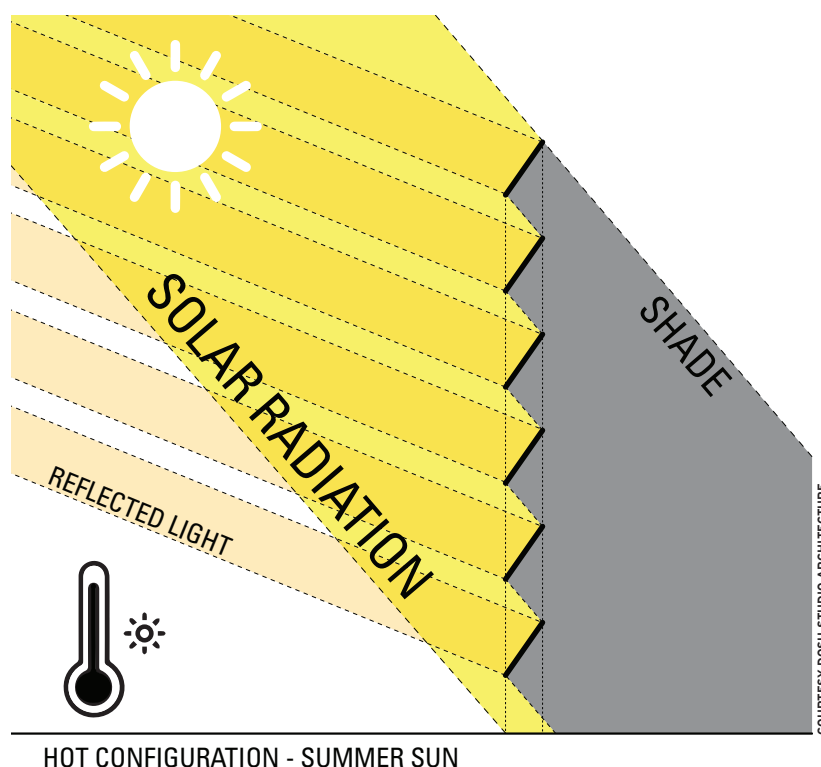
Hot Temperature - Sunny



Cold Temperature - Overcast



COLD CONFIGURATION - WINTER SUN



HOT CONFIGURATION - SUMMER SUN

LEFT AND BELOW: The metal panels in DO|SU Studio Architecture's facade system change when the temperatures rise, thanks to special metals that convert heat to movement.

way. This might control energy and material exchanges, integrate facade components that are mobile, exploit changing material properties, or transform the structure or form of a surface.

To date, dynamic facades have progressed more so in an R&D "prototyping" context, rather than through built case study projects. This stems from complexity of construction, maintenance hurdles, and technological shortcomings. More built examples of kinetic facades can be found in Europe presumably due to a longer term view of payback period for a building. This causes higher initial cost of dynamic components, which might be overlooked in certain U.S. markets. Responsive facades over the past two decades most commonly involve variations on double glazing where a protected internal cavity incorporates dynamic shading and other energy efficiency methods.

The following prototype projects demonstrate how an exchange of energy, material, and information might occur between architecture and the environment:

DO|SU STUDIO ARCHITECTURE GLASS PANEL SHUTTER SYSTEM

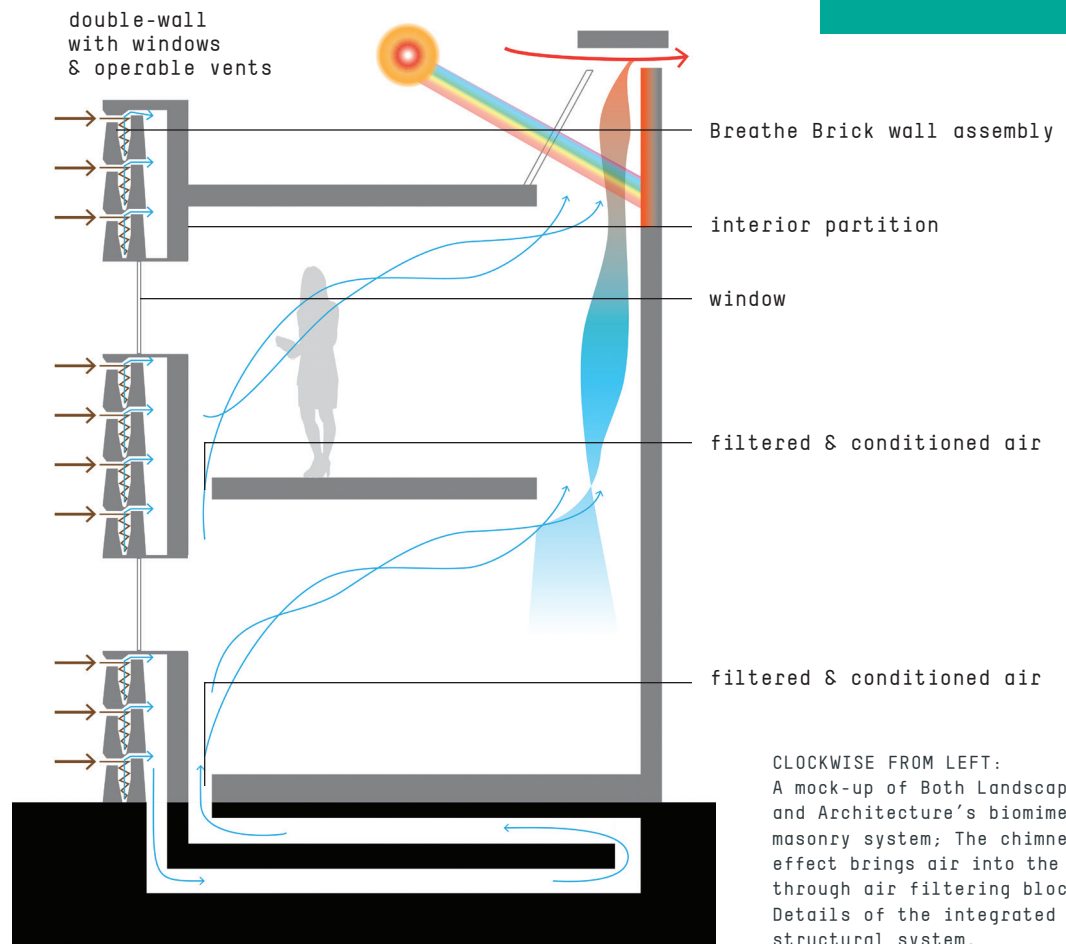
Thermo-bimetal materials that can convert heat to mechanical movement are being examined by biologist-architect Doris Kim Sung at the University of Southern California to create self-loading envelopes, which can allow for natural ventilation without depending on an external source of energy. This system is based on a laminated surface of different metals, which have different thermal expansion coefficients. When the surface is exposed to heat, it causes tension and transformation because of the different expansion length of various metals. If the temperature decreases and the heat source is omitted, then the surface will go back to its original form.

BOTH LANDSCAPE AND ARCHITECTURE BREATHE BRICK

Some of the most purposeful thinking about building skins as active technologies for mediating between interior and exterior draws on strategies variously termed biomimetic or bio-inspired. Carmen Trudell, a researcher and professor at California Polytechnic State University and cofounder of

The dynamic facade is an active system, akin to an intelligent biological skin thanks to real-time feedback from increasingly sophisticated sensors, new innovations in phase-change materials, integrated building systems technology, and more. In the context of global climate change, environmental stimuli and changing conditions suggest that architecture, like living organisms, can benefit from mobility and movement. Motion might even constitute an addendum to Le Corbusier's *Five Points of Architecture*—a sixth point. Beyond free facades and ribbon windows, now we can expand the facade's capacity to manage light, air, energy, and even information.

Despite a variety of definitions and associations, "dynamic" facades might best be categorized as "climate adaptive building shells," or CABS for short. These projects interact with variability in their environments in a dynamic



CLOCKWISE FROM LEFT:
A mock-up of Both Landscape and Architecture's biomimetic masonry system; The chimney effect brings air into the space through air filtering blocks; Details of the integrated structural system.

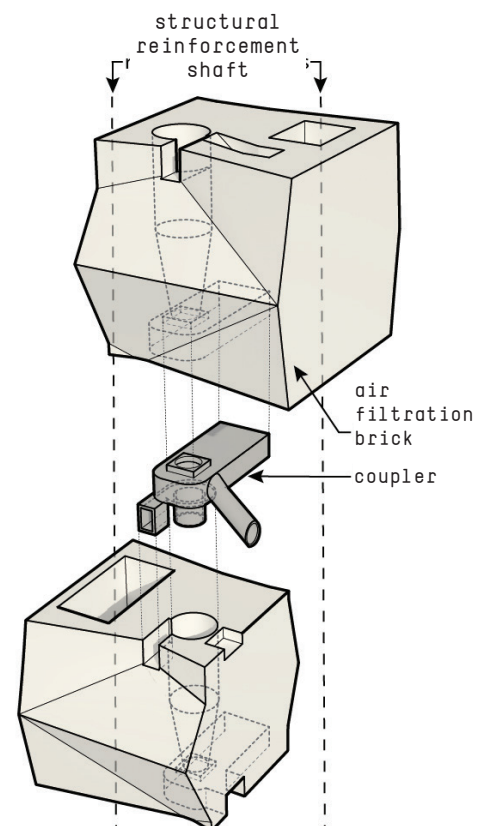
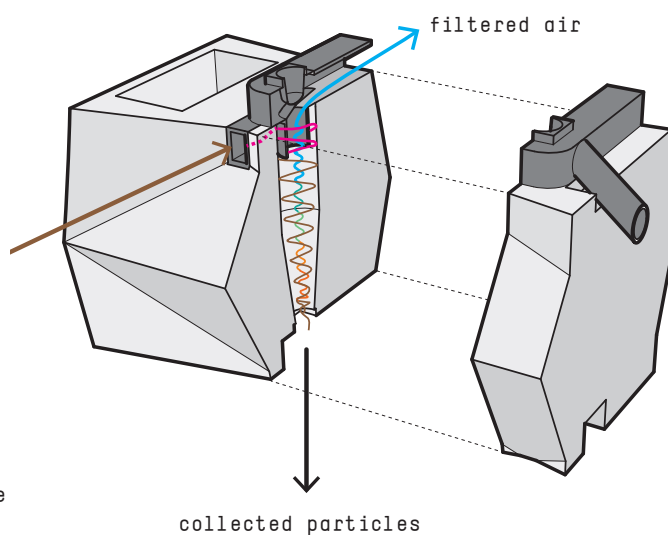
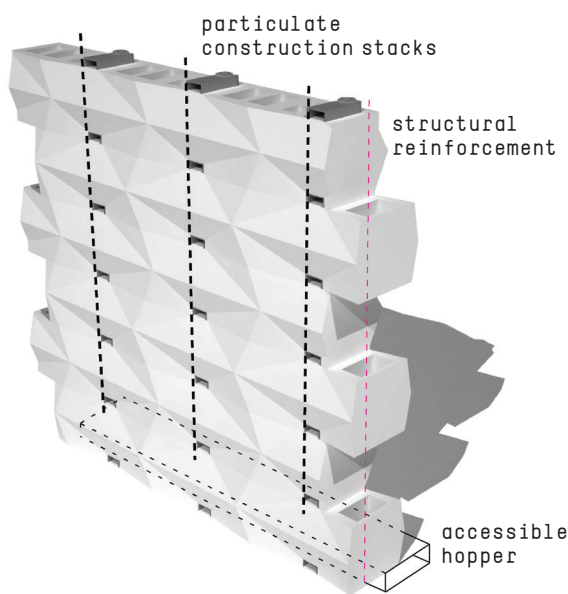
Both Landscape and Architecture, led an interdisciplinary team of students at two universities in the development of an exterior masonry system that is intentionally open to allow air circulation. Trudell said the resulting wall surface performs three significant functions: "Primarily, the masonry system is designed to filter particles from outdoor air before introducing that air to the indoors. Secondly, the masonry system reduces fossil-fuel energy consumption associated with ventilation. Lastly, the wall captures particles, which may be a material resource, and allows for a thermodynamic transfer of energy between the sun, the masonry, and the incoming air."

AGENCY SELFIE WALL
Movements visible to the human eye aren't the only ones that matter. Another response to environmental conditions can be found in the work of AGENCY, whose El Paso-based office deals with issues of movement across borders. Unseen atmospheric and data exchange across the U.S.-Mexico border has been the subject of much of its work, including Selfie Wall, a full scale architectural prototype that exists to educate the public about data security and privacy. The temporary full-scale wall creates a range of lighting conditions day and night, offering a dynamic and interactive space for self-

photography. The wall is built from 162 custom-fabricated units, CNC-milled from composite aluminum panel, and folded to shape different apertures for bouncing, scattering, and collecting light. A grid of LED lights is inset to provide zones of different color temperatures at night. A range of warm color temperatures, flattering to skin tones, lines the inner surface of the space, while a range of cool whites provides a more accurate color rendering on the outer surface. Through an extended online and on-site digital presence, the installation draws attention to the potentials and pitfalls of the vast range of metadata extracted from a still-burgeoning global selfie culture.

IBAÑEZ KIM MINISTERS
Kinesis (the movement of an organism in response to a stimulus such as light) that can occur at the molecular level as with phase-change materials, photo-reactive glazing, or quartz-like dichroic glazing, is another particularly promising area. Ibañez Kim's "manifesto" sculptural installations, coined *Ministers*, produce communicative effects through the dynamic lighting of responsive static volumes. The *Ministers of Arts and Culture* installation relies on two self-supporting shell structures equipped with sensors that respond to nearby activity. As visitors collect around one

structure, the other glows brighter to win their affections. Another project, *Minister of Justice*, invites the public to share secrets by speaking into cone-shaped apertures within the envelope of the structure. The recordings are stored, processed, and replayed later, adjusted an octave higher or lower to maintain the speaker's privacy. In both cases, Ibañez Kim's architecture relies on environmental stimuli—in this case verbal and physical input from user groups—to communicate with the public.





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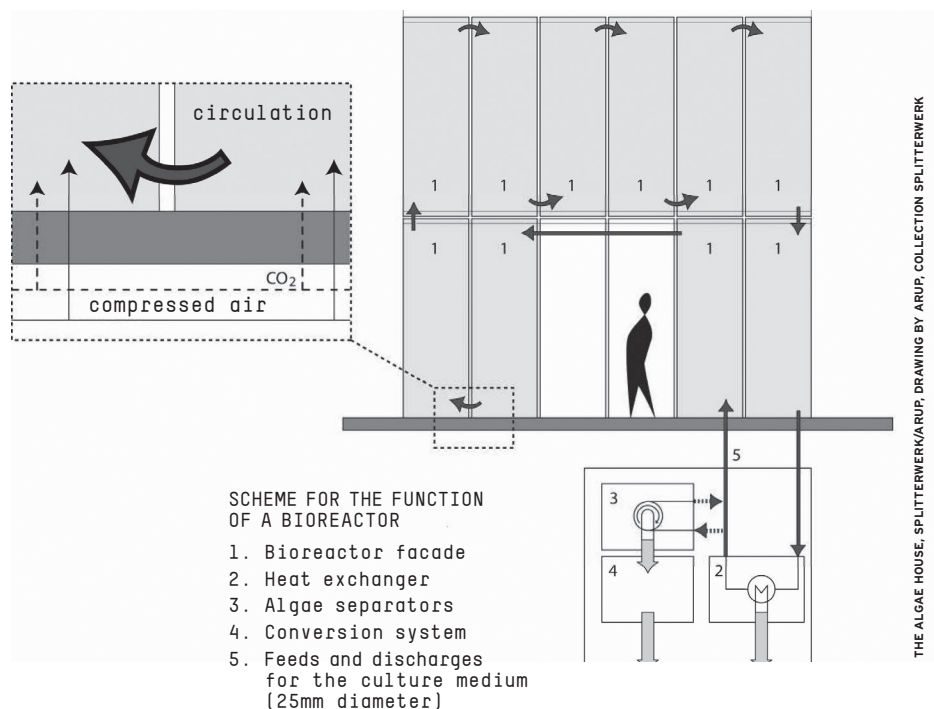




THE ALGAE HOUSE, SPLITTERWERK/ARUP, PAUL OTT PHOTOGRAPHY COLLECTION SPLITTERWERK

SOLARLEAF

HAMBURG, GERMANY



THE ALGAE HOUSE, SPLITTERWERK/ARUP, DRAWING BY ARUP, COLLECTION SPLITTERWERK

Arup has teamed with German architecture firm Splitterwerk to produce a “renewable energy” building-envelope system called SolarLeaf by cultivating micro-algae to generate heat and biomass. The facade is composed of structural glazing units that the team refers to as “photobioreactors,” or PBRs for short. These panels are configured as large external cladding elements that dynamically move to perform as shading devices. The panels are fully integrated into the building systems of the structure to harvest, distribute, store, and use the solar thermal heat on site.

The biomass and heat generated by the facade travels through a closed-loop system to the building’s energy-management center, where the biomass is harvested through floatation. Heat generated through this process is captured by a heat exchanger. This excess heat can be used to help supply hot water, supplement the building’s heating system, or stored for later use.

The project was developed collaboratively by Strategic Science Consult of Germany (SSC), Colt International, Arup, and Splitterwerk. The system was initially unveiled as a pilot project for an integrated system suitable for both new and existing buildings.

According to Arup, the advantage of biomass is that “it can be used flexibly for power and heat generation, and it can be stored with virtually no energy loss.” By cultivating algae in a vertical assembly, no additional land use beyond the footprint of the building is required. The system can be doubly beneficial as an operable shading device and it dynamically changes based on quantity of daylight. “When there is more daylight available, more algae grows—providing more shading for the building.”

The facade assembly, named “SolarLeaf,” was installed as a full-scale pilot project on the BIQ House at the International Building Exhibition (IBA) in Hamburg in 2013. A collection of 129 bioreactors measuring approximately two by eight feet were installed on the southwest and southeast elevations of a four-story building to form a secondary screen held off of the primary building envelope. The panels provided around one-third of the total heat demand for the building’s 15 residential units.

ARCHITECT:
Splitterwerk Architects, Graz

FACADE CONSULTANTS:
Arup, Colt International, Strategic Science Consult (SSC)

CONSTRUCTION SYSTEM:
Photobioreactor facade

CLOCKWISE FROM LEFT:
Extra precaution was taken to make sure the building was sealed as tightly as possible; passive ventilation cools the building in the warm months and insulation prevents heat loss in cool months; a diagram of the photobioreactor.

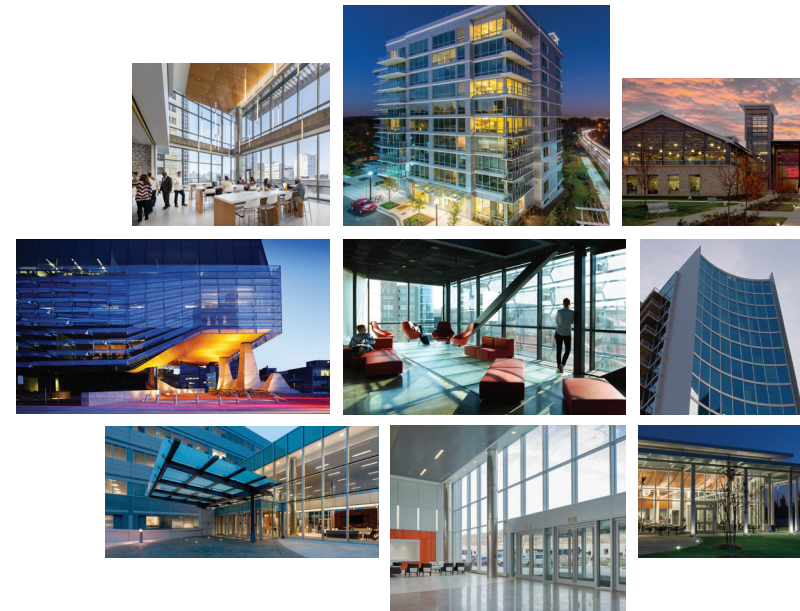
The SolarLeaf facade is based on the idea that the biochemical process of photosynthesis can be utilized in the production of energy-efficient buildings.

The photobioreactors are highly efficient at growing micro-algae through a flat four-panel assembly. Two inner panes have a 24-liter capacity cavity for circulating the growing medium. Set outboard to both sides of this inner layer is argon-filled insulated glass. These layers help to minimize heat loss from the growing process. Compressed air is introduced to the bottom of each bioreactor at intervals. The gas produces large air bubbles and generates upward water flow, helping algae to absorb CO₂ and light.

According to Arup, the system can be used year-round and is operating with an efficiency of 10 percent, slightly lower than the 12 to 15 percent efficiency of standard photovoltaic panels.

The SolarLeaf facade creates synergies by linking different systems for building services, energy and heat distribution, diverse water systems, and combustion processes. Arup believes the technology benefits from strong interdisciplinary collaboration, tapping on the skills of environmental designers, facade engineers, material scientists, and engineers. Arup added, “The key to a successful implementation of photobioreactors on a wider scale will be cooperation between stakeholders and designers.” **JS**





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SUNBREAK

SEATTLE, WASHINGTON

Sean McKeever, senior associate at NBBJ, works between architecture and energy modeling in the firm's corporate and digital practice studios. "One of the things I appreciate the most about architecture is not its static state. I love to see a building that is clearly 'living' with its occupants. There's beauty in letting users have a certain amount of control over the building." In response to a growing desire for clients to produce more user control over their workplace, McKeever and his colleagues have released multiple apps for smartphones and a prototype for a smartphone

controlled facade-shading device.

The prototype, called Sunbreak, is a responsive system of louvers that raise and lower dependent upon solar radiation, temperature, and user override variables. The project has its roots in the Seattle office, which is one of the first buildings in the country to integrate automated exterior blinds that raise and lower with pre-programmed sun paths throughout the day. Although these sunshades have been a popular feature from the start, they block employees' views when deployed, inspiring the firm to improve them. McKeever attributes

this to a lack of user control, and the fact that the blinds operate without regard to radiation data.

Sunbreak runs off of pyranometers—sensors measuring solar radiation and infrared light. When shading is not needed, the panelized system folds up to hide from view while performing as a light shelf to direct daylight further into the building. The modular shades feature narrow slats that operate along vertically oriented tracks. As the system contracts, individual panels fan out to form curvilinear shapes, which NBBJ's team has fine-tuned to produce optimum shading

responses throughout the diurnal cycle.

The project is panelized so that individual units can be controlled by a smartphone app, allowing users to operate the shades in real time. Since Sunbreak was developed, user-control and responsiveness to sensed data has extended to the interior workplace. "The user-driven ultra-controllable workplace is the desirable workplace of the future and present." In response, NBBJ's Digital Practice group has developed an app called Goldilocks that utilizes real-time data to track acoustics, temperature, daylighting, and activity within open office environments, giving employees the option to find ideal working environment for their current tasks.

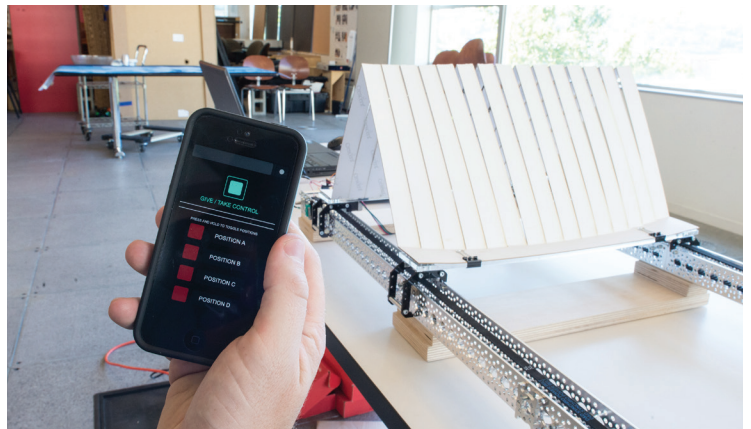
McKeever believes facade projects are more challenging to implement for the industry due to their complexity: "I think dynamic facades are still

responses throughout the diurnal cycle. TOP: The smartphone app that controls the system is called Goldilocks.

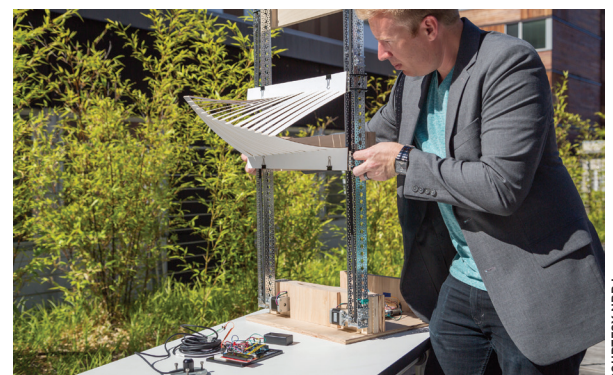
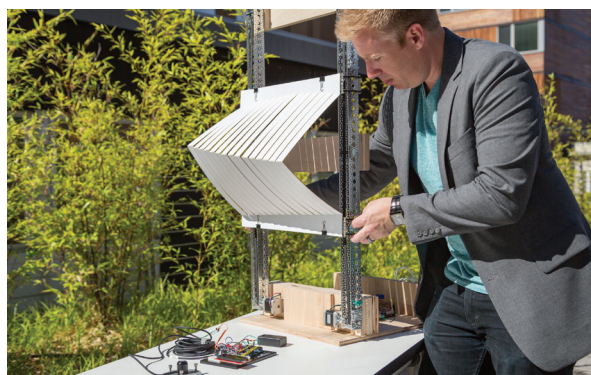
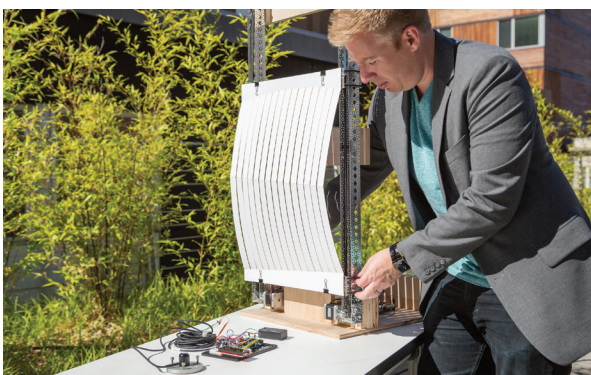
ABOVE: A prototype of NBBJ's responsive louver system demonstrates how the automated exterior blinds can be raised or lowered depending on the movement of the sun or the users' preferences.

BELOW: The individual panels can take different shapes to best shade the sun.

in a 'prototyping' phase for much of the industry. To deliver a project of this ambition at full-scale you need collaborative partnerships among teams of specialists and capital investment... I'm excited where the industry is going, but it feels like we can't get there fast enough!" **JS**



COURTESY NBBJ



COURTESY NBBJ



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ARCHITECT:
Solomon Cordwell Buenz

LOCAL ARCHITECT:
Epstein

FACADE INSTALLER:
Widok

FACADE SYSTEM:
Unitized curtainwall with
integrated LED

LIGHTING CONSULTANT:
Candelux

**LED PROGRAMMING
CONSULTANT:**
Luxmat

GLAZING MANUFACTURER:
Guardian Industries

**CURTAINWALL
MANUFACTURERS:**
Aluprof, Widok

DEVELOPER:
Golub GetHouse

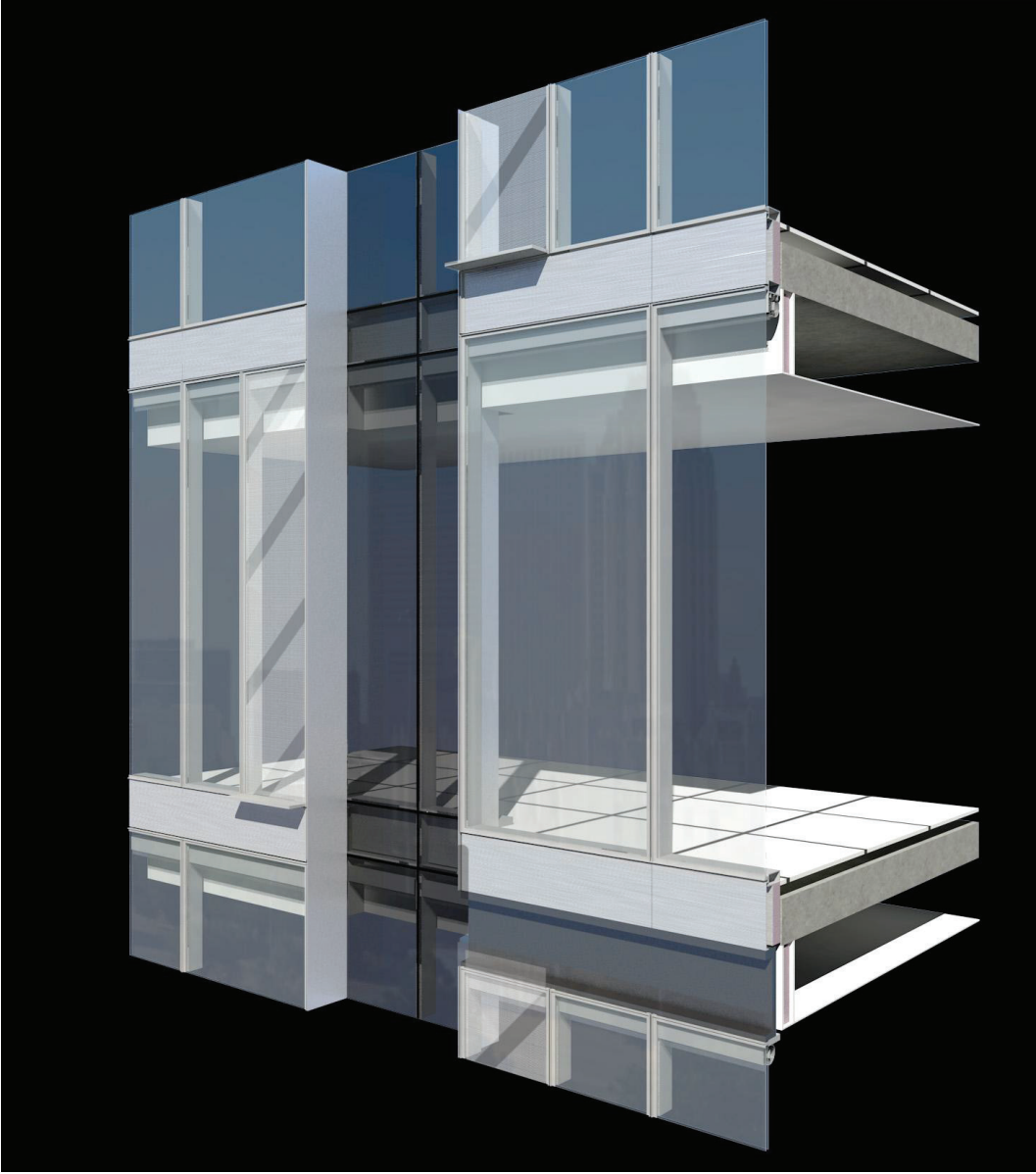
RIGHT: The LED display on
the Prime Corporate Center
can produce a variety of
lighting schemes.



COURTESY GOLUB GETHOUSE

THE PRIME CORPORATE CENTER

WARSAW, POLAND



An active light display animates the facade of a new office building in Warsaw, Poland, highlighting the Wola neighborhood's transition from industrial manufacturing to a new residential and office district. The Prime Corporate Center was designed by Chicago-based architectural firm Solomon Cordwell Buenz in conjunction with the Warsaw office of Epstein.

The building's design addresses varying vehicular and pedestrian arrival points by segregating car drop-off from those arriving by public transit. Coordinated with the scale of the street, an additional 15 stories of offices sits above an eight-story base.

Martin Wolf, principal at Solomon Cordwell Buenz, said the simplicity of the building allowed his team to focus on a sophisticated facade composition: "This project became an exercise in pattern, geometry, and very subtle layers of texture. We achieved this through the combination of fritted glass panels, clear view glazing, and a selective articulation of the curtain wall system."

At night, a grid of LED lights incorporated into the unitized curtain wall system produce a delicate, shifting array of color and pattern that dramatizes the exterior wall. Guardian Industries' Polish-based manufacturing location provided glazing and worked with the project team to integrate LED wiring into the curtain wall. These linear lights are wired into a central computer housed in the building, which hosts a computer-sequencing program. The technology allows for Prime's facade

LEFT: A detail drawing of the exterior lighting shows the LED uplights mounted to the projecting aluminum shelf.

to be easily programmed by the building operator, who can flexibly produce variation in lighting schemes.

Prime's building envelope features integrated building systems to control the MEP/FP systems, a monitoring system that optimizes water and electrical power consumption, a heating recovery system, and an interior shading system to help manage solar heat gain. The office plates are designed for future flexibility, incorporating a raised floor system and column-free interior space. These features contribute to the building's BREEAM certification, a UK green building rating system.

Wolf said the Solomon Cordwell Buenz's office continues to have an ongoing interest in integrative lighting techniques, and that LEDs allow for an impressive amount of variables for any project team to work with. "The beauty about LED is that if you wire it properly, you have an infinite array of color, sequencing, intensity, and timing." Facades like Prime's, which have the capacity for coordinated building-scale lighting schemes have the opportunity to communicate with the city utilizing data analysis, upcoming cultural events, and atmospheric conditions. According to Wolf, Prime is an "incredible work of art," and adds "a needed touch of whimsy" to the urban context. **JS**

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ARCHITECTS:

Freelon Adjaye Bond/SmithGroup
(Freelon Group, Adjaye
Associates, Davis Brody Bond,
SmithGroupJJR)

FACADE CONSULTANT:

Heintges & Associates

FACADE CONTRACTORS:

Enclos, Northstar

FACADE SYSTEM:

Hung AESS truss and framing
system with structurally glazed
curtainwall units installed onto
AESS from interior (corona framing
and enclosure); cast aluminum with
custom artisan five-coat PVDF coated
panels on AESS carrier frames
(corona screen); bent laminated
glass clerestory (oculus); Metal
panel rainscreen.

**STRUCTURAL
ENGINEERS:**

Guy Nordenson & Associates with
Robert Silman Associates

**CONSTRUCTION
MANAGER:**

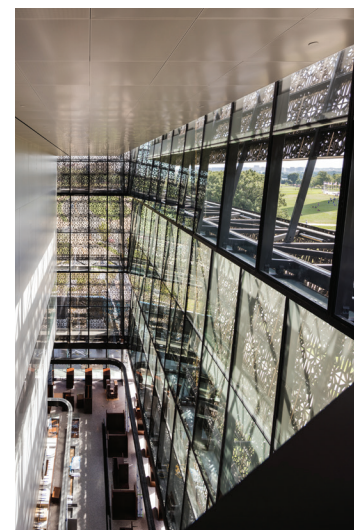
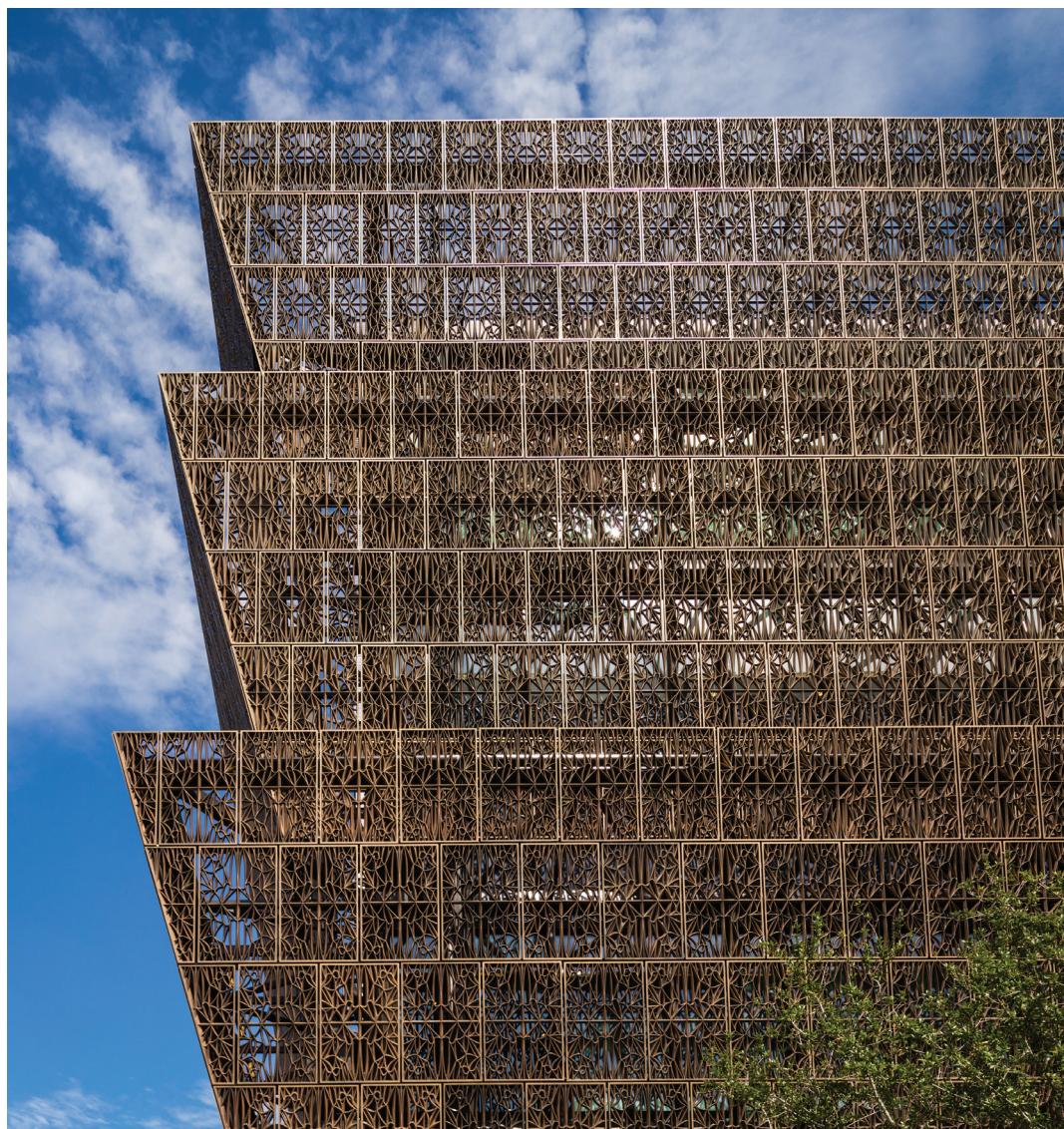
Clark Smoot Russell

LIGHTING CONSULTANT:

Fisher Marantz Stone

**MECHANICAL
ENGINEER:**

WSP Flack & Kurtz



COURTESY ALAN KARCHMER/NMAAHC

ABOVE: Large panels of glass on the interior interact with the screen to offer views of the Washington Monument, Lincoln Memorial, Jefferson Memorial, White House, and the U.S. Capitol.

LEFT AND BELOW: A collaboration among Adjaye Associates, Freelon Group, Davis Brody Bond, and SmithGroupJJR, the National Museum of African American History and Culture features an intricate daylight-filtering screen.

NATIONAL MUSEUM OF AFRICAN AMERICAN HISTORY AND CULTURE

WASHINGTON, D.C.



This is one of our most-read blog posts from our popular Facades+ newsletter. Go to archpaper.com to subscribe now.

While the National Museum of African American History and Culture has received much acclaim for its cultural, historical, and design importance, its facade is also notable. Most striking is its three-tiered, inverted form full of African and American historical references, drawing from Yoruban caryatids and the Washington Monument, topped with an arresting daylight-filtering screen referred to as a corona. Adjaye Associates' decorative screen pattern was digitally manipulated—scaling up and down to produce four densities ranging from 65 to 95 percent opacity in response to key views of the surrounding monuments and solar orientation. Additionally, the corona screen was assembled on-site from shop-fabricated steel-plate carrier frames containing 13 cast aluminum panels each. A staggered paneling running across the facade required selective panels to be installed in the field. These “stitch panels” bridge the gaps between adjacent carrier frames, helping to conceal any visual clues to the prefabricated frame assembly.

The material-selection process for the corona screen began with solid cast bronze, which was deemed too heavy and a variation that—over time—would cause undesirable

performance and maintenance issues. The design team settled on a cast aluminum due to the material's track record as a reliable cladding. A unique five-coat application of PVDF produced variation and depth to the bronze coloration of the panels. The pattern was developed by digitizing traditional shapes that David Adjaye's team found in historic ornate ironwork from Charleston and New Orleans.

With full-height atriums on each of the museum's four sides, the exterior envelope was conceptualized as an “inside-out” assembly, providing clear spans of glass to the interior. Guy Nordenson & Associates developed the primary structural system—a series of three horizontal trusses that wrap the building, giving the facade its signature tiered form. Construction detailing of the envelope was carried out through a design-assist package awarded to a joint venture between Enclos and Northstar, which developed a cost-saving strategy to integrate vertical trusses within the curtain-wall assembly. Heintges & Associates then engineered and developed technical options for systems that attached to this structure, including the screen panels and unitized glass panels. **JS**



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SEDAK

Isomax's new IGU product line uses a vacuum insulation panel that allows the glass units to reach insulation values of up to 0.23 W/m²K. The new product has the same thermal level as a solid wall, but is no thicker than before, so it can be combined with any facade system.

sedak.com

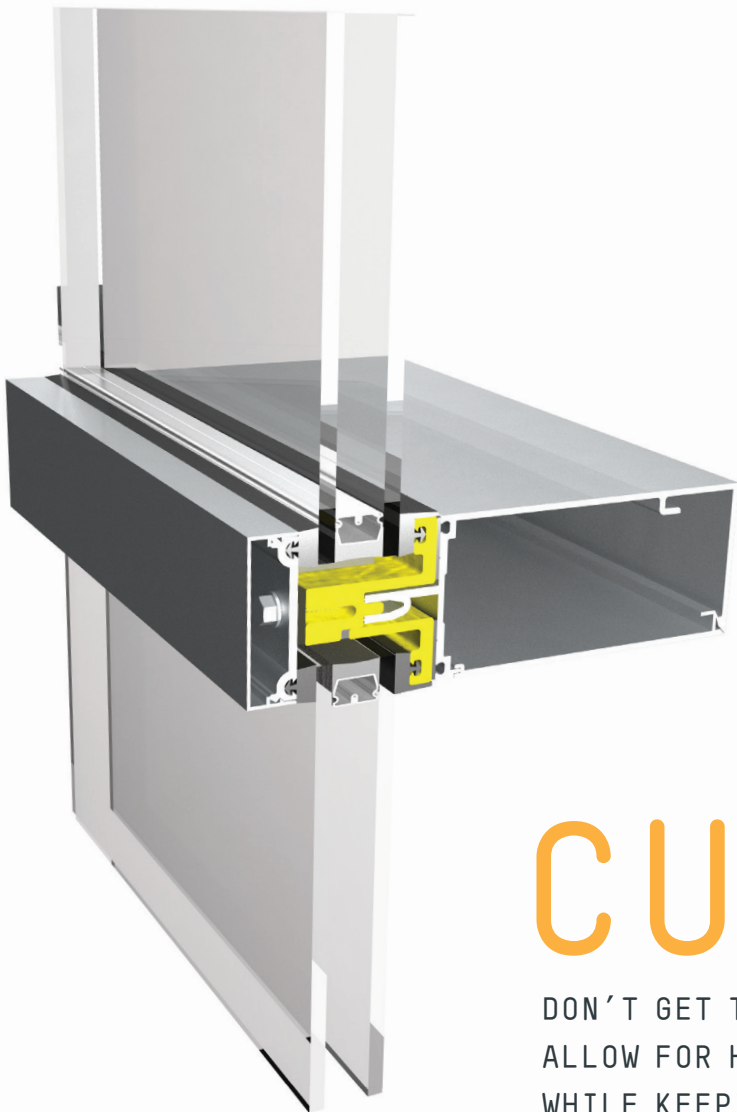


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crlaurence.com

ARCHITECT:

Kohn Pedersen Fox

FACADE CONSULTANT:

Vidaris

FACADE INSTALLER:

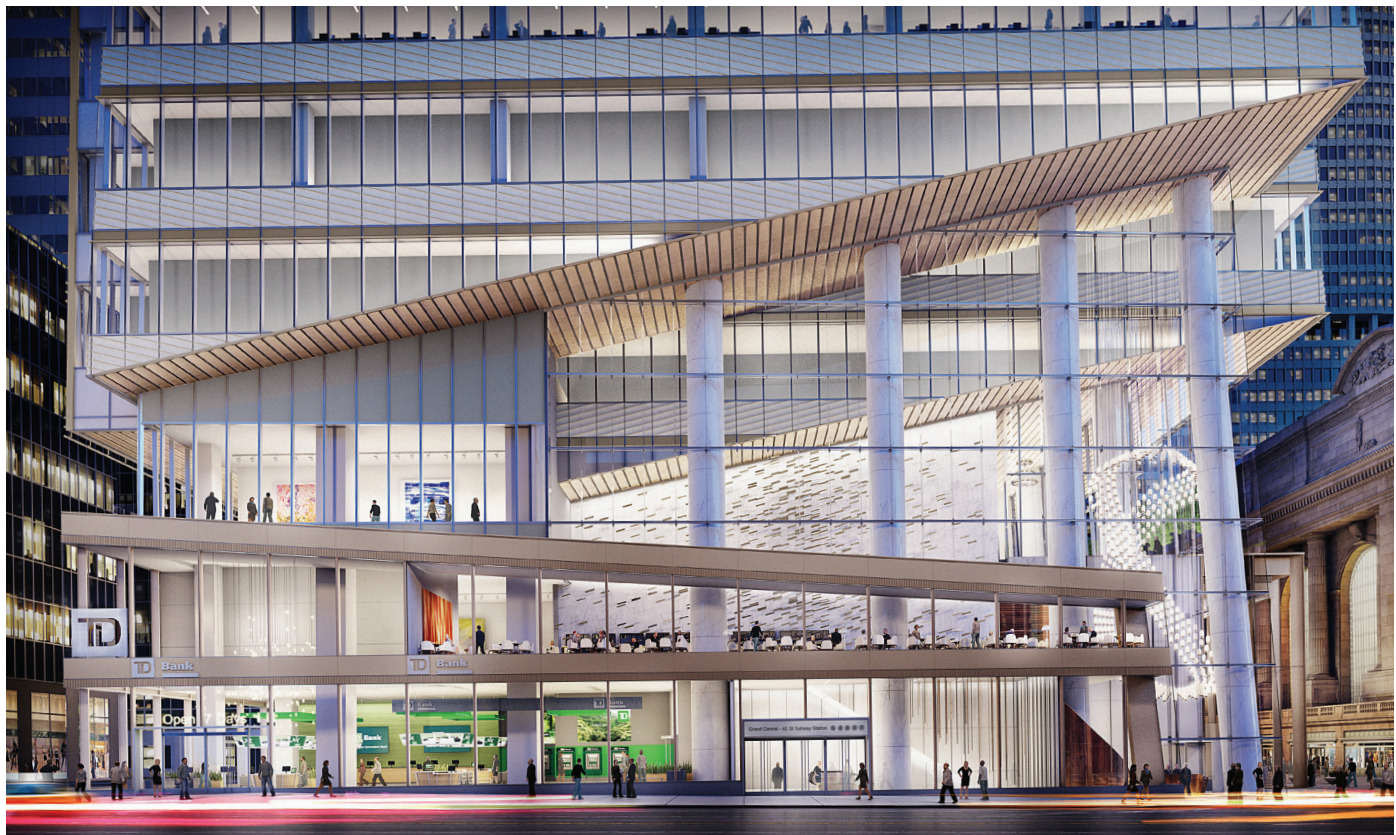
Tishman Construction

FACADE**MANUFACTURERS:**Permasteelisa, Boston
Valley Terra Cotta,
Guardian Industries**FACADE SYSTEM:**Glass and terra-cotta
curtain wall**CORE/SHELL ENGINEER:**

Severud Associates

**CURTAIN WALL
ENGINEER:**

Permasteelisa



COURTESY KPF

ONE VANDERBILT

NEW YORK, NY

This soon-to-be neighbor of Grand Central Terminal was strongly influenced by its Midtown context. "From very early on, even the competition phase, we felt really strongly that it needed to have an element of masonry construction," said Darina Zlateva, associate principal at Kohn Pedersen Fox (KPF). "Obviously, this is a high-rise super-tall building, and so how that translated to us was high-performance terra-cotta,

which we included in our spandrel."

The team chose to collaborate with Boston Valley Terra Cotta, and the two companies have been working on the glaze since 2013. Terra-cotta is included throughout the entire tower—including the podium—and there is a series of cuts at the base whose underside is entirely made up of terra-cotta. The spandrel zone has diagonal pieces of white terra-cotta that extend from the base to the very top of the tower. The curtain wall is double-

glazed, double-fired terra-cotta, the structural system is extruded aluminum, and there is a high-performance glass on the vision—it's an IGU with a Low-E coating on the number two surface, provided by Guardian. The gold metal fenestration that doubles up as a shading device is composed of back painted glass with a metallic finish, supplied by Permasteelisa.

The building partition is four interlocking sloped masses, which provide air and light down to the

street. "This is something that's really important for the city of New York," stated Zlateva, "so we worked with the Department of City Planning to make sure that our building angles complied with their light and air requirements." At the base, those

four tapered volumes get sliced in order to create a view corridor to Grand Central. This will mark the first time in a century that pedestrians will be able to see the corner of the terminal from 42nd Street.

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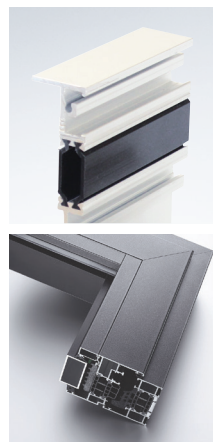
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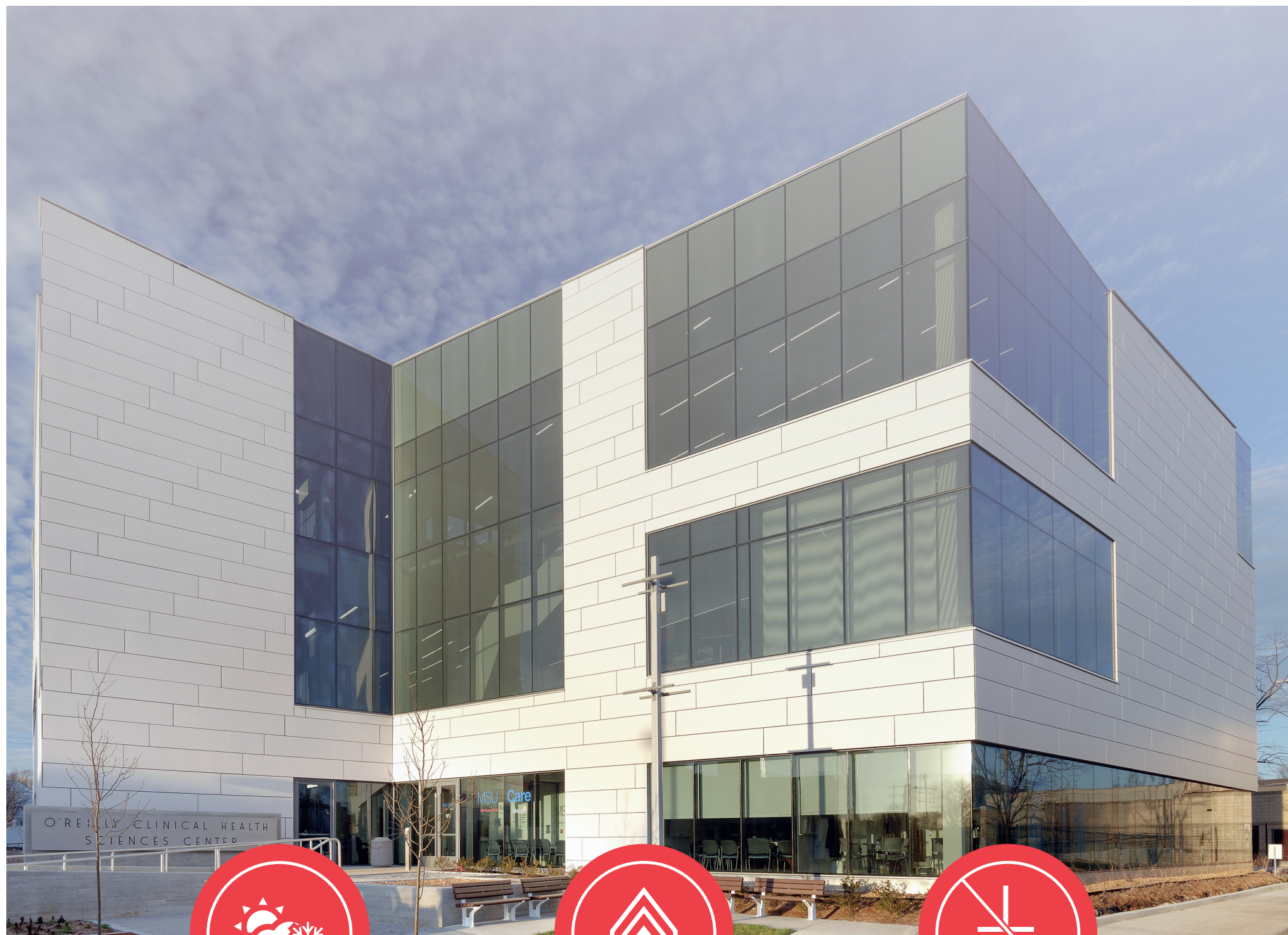


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ARCHITECT:
Herzog & de Meuron

ASSOCIATE ARCHITECT:
Höhler + Partner

GLASS FACADE:
Gartner (Permasteelisa)

ACOUSTIC CONSULTANT:
Nagata Acoustics

GENERAL CONTRACTOR:
Adamanta and Hochtief Solutions

FLOAT GLASS:
Guardian Industries

GYPSUM FIBER PANELS:
GIFAtec

CLOCKWISE FROM TOP:
The Elbphilharmonie glows
at night in Hamburg; The dot
matrix pattern is tuned to
sun angles and the use of
each space; A density diagram
of the dot matrix print on
the triple-glazed facade.



COURTESY HERZOG & DE MEURON

THE ELBPHILHARMONIE

HAMBURG, GERMANY

The Elbphilharmonie in Hamburg, Germany, designed by Herzog & de Meuron, is an assemblage of superlatives: the longest curved escalator in the world, the most over-budget construction project

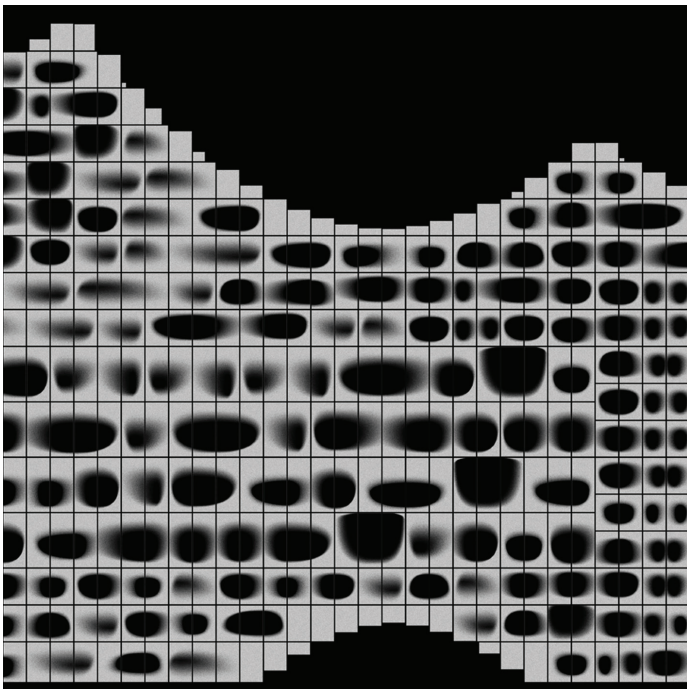
in modern German history, the best new building of 2017. Less remarked upon, though no less remarkable, is the shimmering multihyphenate. It is, in sum, a concert hall-hotel-public-plaza-luxury residence overlooking

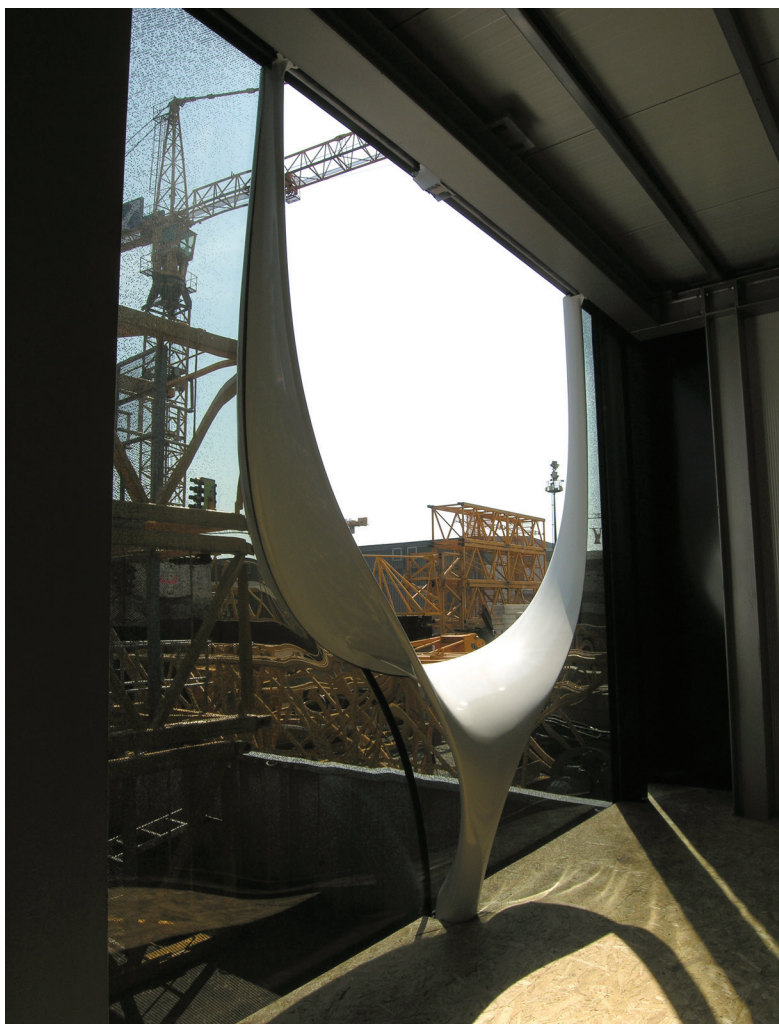
the Elbe River, sheathed in one of the most technologically advanced curtain walls in the world.

A feat of fabrication and customization, the Elbphilharmonie's expressive glass facade spans from the 9th story

to the 26th-story roof and contains a 244-room hotel, two concert halls, and 45 private residences. The eighth-floor public plaza, with sweeping views of the sprawling Hamburg port, sits atop a historic warehouse

structure that the Swiss architects gutted and built out to house administrative offices, parking spaces, and a smaller performance hall. While the base building establishes a material connection with the brick





LEFT:
Glass fiber-reinforced polymer structural mullions hold double-curved glass panels in place.

BELOW:
The reflective glass surface is perforated by openings that facilitate views.

warehouses that proliferate near the port, many of which have already been repurposed for cultural programming, the undulating glass facade gestures at grand plans for the vicinity's future. As the architectural anchor of the HafenCity development, currently the largest urban regeneration project under construction in Europe, the Elbphilharmonie represents Hamburg's ongoing efforts to redefine its port as a forward-looking cultural center in Germany and internationally.

"Herzog & de Meuron defined extreme technical requirements for the unitized glass facade," said Klaus Lothar, managing director of the building's glass curtain wall fabricator, Josef Gartner GmbH. When construction on the Elbphilharmonie began in 2007—a decade before it opened on January 11, 2017—the design's double-glazed panels, those curved at only one edge, were still beyond the limits of technical feasibility. Gartner developed that

production process specifically for the Elbphilharmonie in collaboration with a materials laboratory at the University of Applied Sciences in Munich. These particular panels now cover the building's residential areas and parts of the philharmonic foyer that benefit from natural ventilation. Each outwardly curved edge is attached to a bulbous mullion that contains an operable oval vertical tilt window—an impressively inventive and elegant solution to air circulation that allows fresh air, and the muffled sounds of ships passing through the harbor below, into the building. The mirrored-aluminum mullions reflect panoramic views of the surrounding port, strengthening the connection between the building and its urban environs.

Other panels are either double-curved both inwardly and outwardly, or flat—in the final calculation 1,583 flat and 601 spherically curved panels cover

the facade. Individual facade units are partially coated with a chrome-based multilayer glazing system, the ipachrome design from AGC Interpane, to create a unique dot matrix determined by that panel's orientation toward the sun and the usage of the room it encloses. Arrayed in circular patterns that frame views from inside, these miniscule dots reflect sunlight while mitigating heat transfer to the building and create a glimmering gradient across the glass surface that changes in response to daylight conditions. The west and south-west facades have an additional dot coating to dampen reflective radar waves from passing ships. With these coatings, each of the 2,184 glass panels in Herzog & de Meuron's design is unique—unlike any other unit on the Elbphilharmonie facade, or on any building before it. **ANNA KATS**



ARCHITECT:
WORK Architecture Company

ARTIST, COLUMN CAPITALS:
Michael Hansmeyer

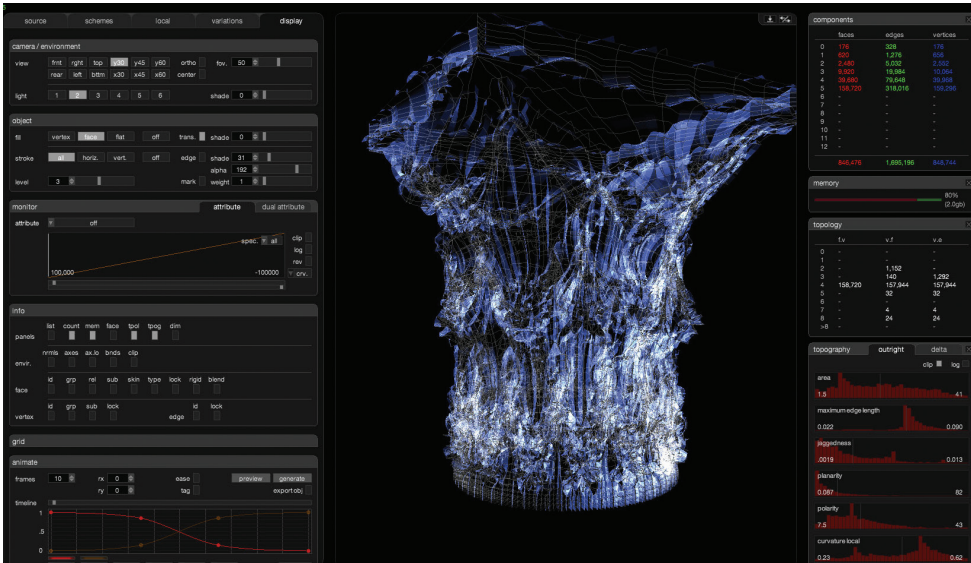
**FABRICATOR,
COLUMN CAPITALS:**
Digital Atelier

RESTORATION ARCHITECT:
CTS Group

CODE CONSULTANT:
CCBS Consulting

STRUCTURAL ENGINEER:
Robert Silman Associates

**MECHANICAL/
ELECTRICAL ENGINEER:**
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BRUCE DAMONTE, COURTESY WORKAC

STEALTH BUILDING

NEW YORK, NY

You'd be forgiven for walking by 93 Reade Street without looking twice. Built in 1857, it's one of the city's oldest cast-iron buildings, but in the Tribeca South Historic District it's one of many. A closer look however, would reveal a subtle but radical intervention. After a recent renovation by WorkAC, the charcoal colored facade now features computationally created column capitals designed by architect and programmer Michael Hansmeyer to replace the building's lost cast-iron Corinthians. Despite evoking the work of H.R. Giger, there's nothing alien about 93 Reade's capitals, the new abstract, complex folds not only look right on the Italianate 19th century building, they *feel* right.

There were no surviving photos or

drawings of the original capitals so Hansmeyer used basic information about their classical proportions to create a digital model, whose mesh surfaces were subdivided according to an algorithm. Adjusting the parameters of this process could create an infinite variety of capitals so complex we don't have the technology to build them (yet), so additional restrictions were put into place—not only to ensure the capital could be fabricated, but also so that it could be attached to the existing column bell and resonate with the historic context. Still, the architects had to winnow down hundreds of algorithmically-grown designs before the client selected the final form. To produce the capitals, a mold was 3-D printed, then casts were made

using glass fiber reinforced concrete (GFRC), a composite of sand, cement, acrylic polymers, glass fibers, and other admixtures that formed a high compressive, tensile, and flexural strength without the need for additional steel or wire reinforcement. Like historic cast-iron, GFRC's strength and flexibility makes it ideally suited for casting light, thin, and durable forms like 93 Reade's capitals, which were were attached to the facade's existing cast-iron bells using the same bolt holes. The high-tech solution was not only approved, but applauded by the city's Landmarks Preservation Commission, who noted that the use of "modern design technology and materials [was] compatible with the historic character of cast iron, which was originally

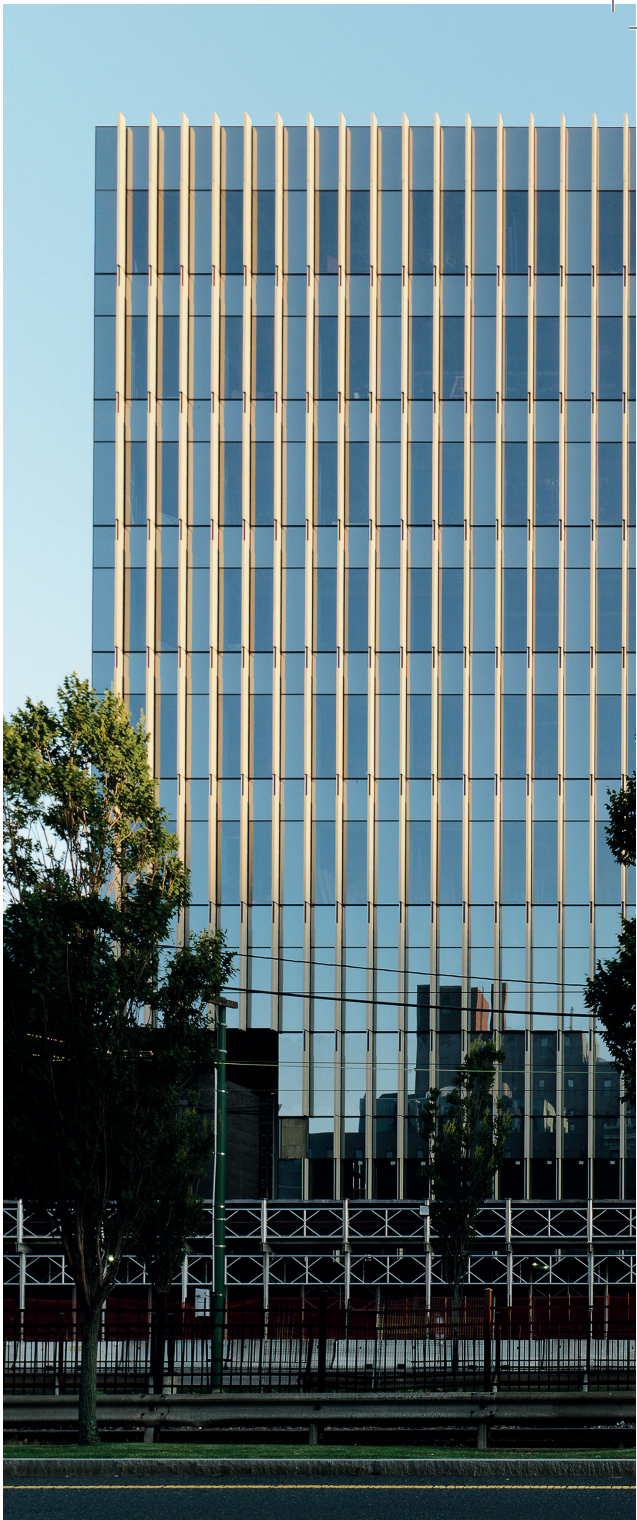
introduced as a revolutionary system of construction and ornamentation." They get it. Architects working in historic districts have a responsibly as stewards of a sense of place. That doesn't mean imitating or reproducing the forms of the past, but thoughtfully interpreting the ideas and innovations that first produced those forms. This is architecture at its best, building on tradition in a manner that's relevant to today.

So does this mix of technology and tradition signal a new way forward for historic districts? "In a broader sense, many types of algorithms are already used in preservation work," Hansmeyer pointed out. Indeed, 3-D scanning and printing are algorithmically driven processes that are often used to reproduce

CLOCKWISE FROM UPPER LEFT: Architect and programmer Michael Hansmeyer helped WORKac cast GFRC capitals; the cast-iron facade is in a historic district, but the architects invented their own capitals, which the Landmarks Preservation Commission approved because the case was made that most capitals were made up; Hansmeyer's digital file.

architectural components. However, "whether or not algorithms will also be used in a more generative sense," he added, "is an open question"—a question appropriately asked by 93 Reade Street, which was originally built for the prominent Jones family and is still daring us to "keep up."

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Aurecon

MANAGING CONTRACTOR:
John Hindmarsh

WINDOW MANUFACTURER:
Kingswood Aluminum



LEFT AND BELOW: To create this geometric facade at the South Australian Health and Research Institute in Adelaide, Australia, the team at Woods Bagot translated 15,000 triangular panels into 20 offsite-fabricated modules in aluminum and low-E double glazing.

FACING PAGE, FAR RIGHT: These Rhino and AutoCAD models are based on the split up of the integrated structural facade systems. The system used parametric modeling tools that allow it to adapt to sunlight, heat load, glare, and wind deflection, without disrupting views or daylight.

FACING PAGE, LEFT: The afternoon sun is mediated by the metal shades.

SOUTH AUSTRALIAN HEALTH AND MEDICAL RESEARCH INSTITUTE

ADELAIDE, AUSTRALIA

Adaptations to a tricky site that is diamond-shaped and oriented roughly north-south—exposing a flank to Adelaide's ferocious sunlight—gave Woods Bagot's South Australian Health and Medical Research Institute (SAHMRI) a striking profile. The

medical research program building has a rounded biomorphic form: microorganisms, pinecones, echinoderms, and sharkskin come to mind.

Situated near the River Torrens, major train lines, and the forthcoming

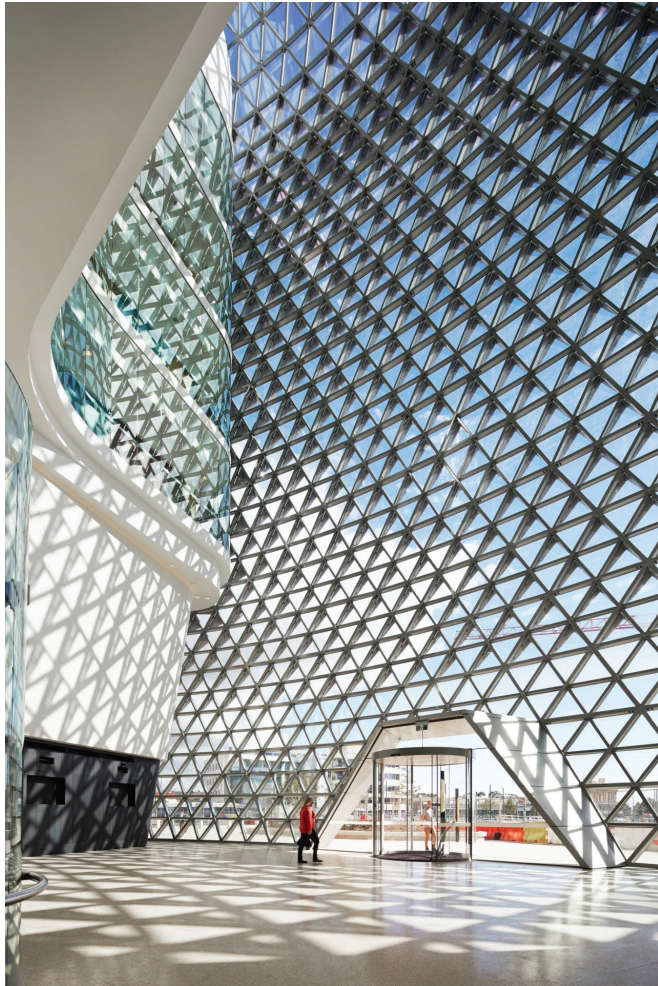
New Royal Adelaide Hospital, SAHMRI maximizes pedestrian permeability and urban connectivity by escaping the ground plane, associate Michael Andrew of Woods Bagot's Adelaide office said. Plaza-level "flower columns" transfer loads from

36 columns to six copper-coated, plaster-clad structural-steel junctions, clearing subterranean space for a vivarium and a nuclear-medical cyclotron. The volume appears to float above grade.

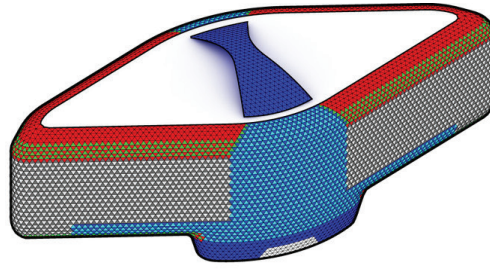
With eastern and western atria

up to 130 feet in both height and width, a Buckminster Fuller-type diagrid structure offered the logical cladding geometry that allowed large spans, Andrew said. Services and ductwork are protectively placed to the west—"the western elevation

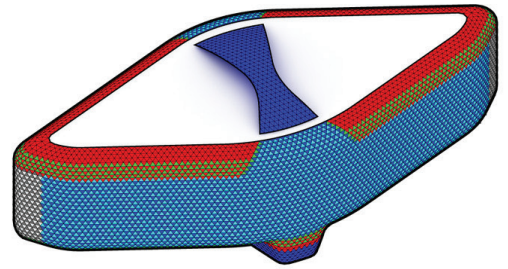




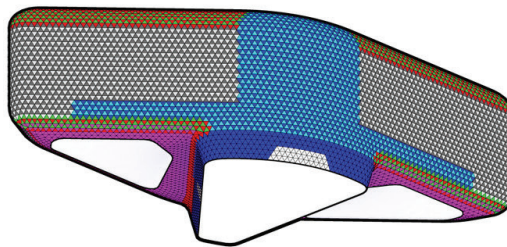
West Facade Arial Axo



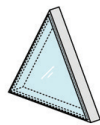
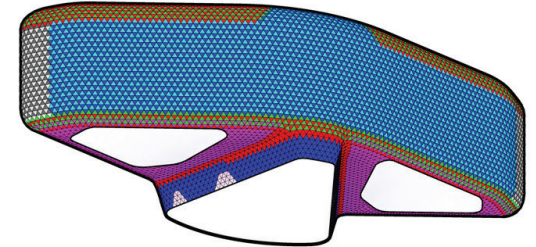
East Facade Arial Axo



West Facade Underside Axo

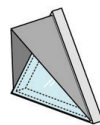


East Facade Underside Axo



Type_01

- Glass



Type_02

- Glass
- Sun Shade

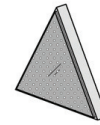
Type_03

- Metal



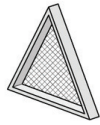
Type_04

- Expanded Metal



Type_05

- Metal



Type_06

- Birds Mesh

Glazed panels

Solid metal panels

Perforated metal panels

Open panels

really gets blasted in the afternoon sun," he noted—giving laboratories and write-up areas the better eastern views, with a sinuous interior glass partition that draws light deeply into work areas.

Some 15,000 iterations of the

triangular panels were rationalized via Rhino/Grasshopper into an affordably offsite-fabricated array of 20 open, solid, shaded, and bird-mesh variants in aluminum and low-E double glazing. "Across four of its broader surfaces, it's highly repetitive," said New York-

based principal Shane Burger. "We focused the customization to the more complex sections, [achieving] an economy of that repetition," then reran programmatic and solar analyses. The facade modules suggest circadian, perspectival, and textural

variation while balancing light-shading increments, public transparency, and thermal control. "It gives a perception of complexity without being complicated," Burger summarized.

Photochromic glass and a solar array hit budgetary hatchets, at least

for now; the roof can accommodate future flexible photovoltaics, Andrew added. Still, as Australia's first LEED Gold-rated biomedical-research building, SAHMRI makes the building-as-organism metaphor uncommonly credible. **BILL MILLARD**

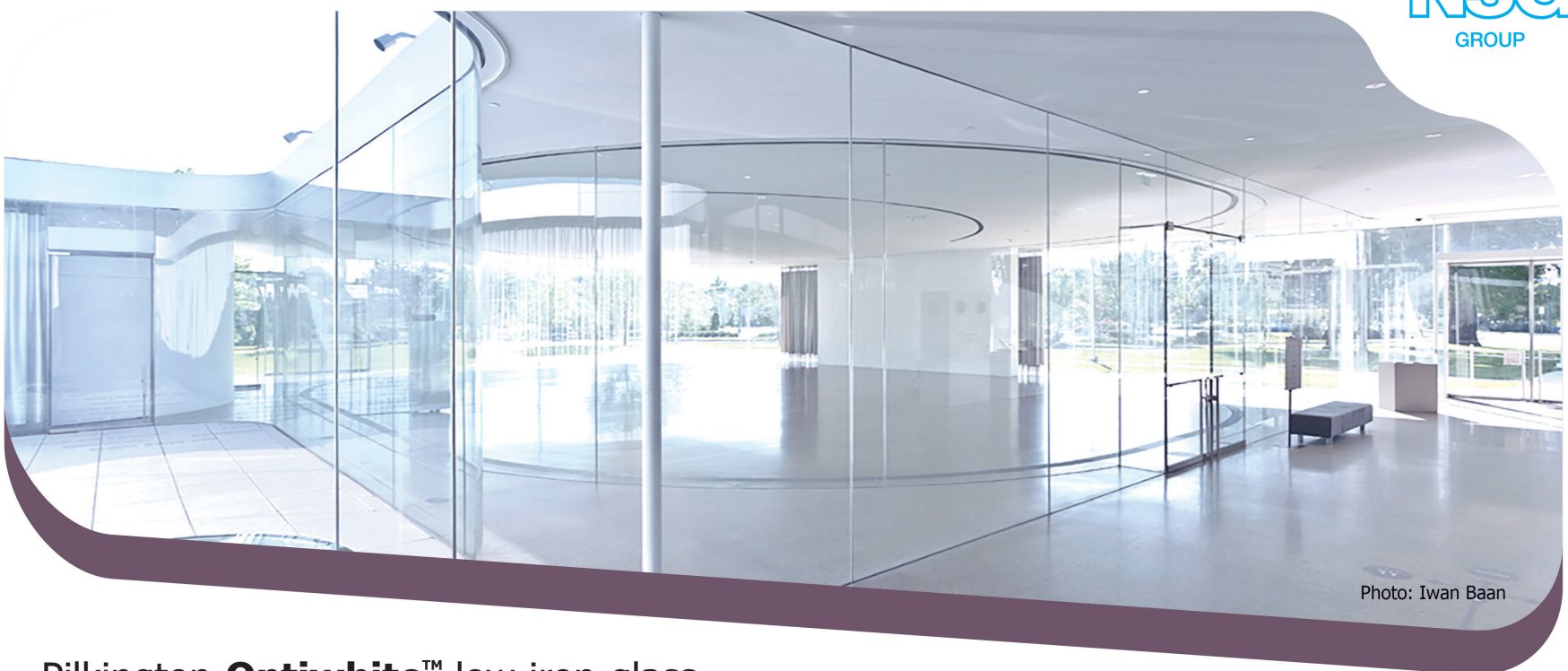


Photo: Iwan Baan

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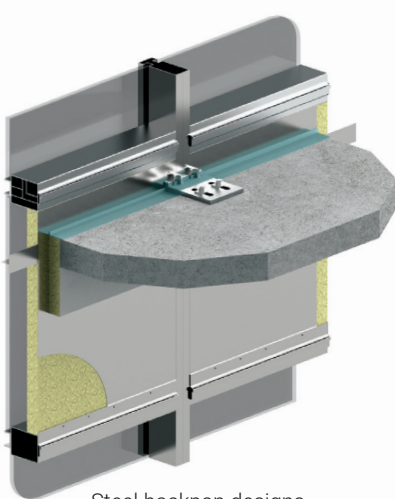
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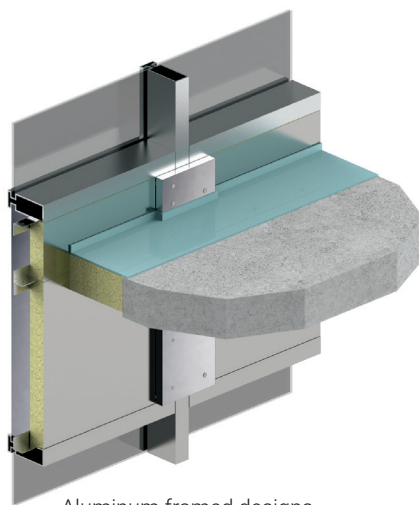
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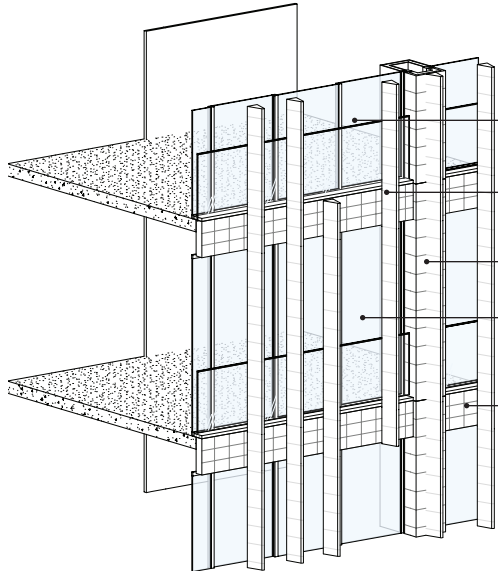
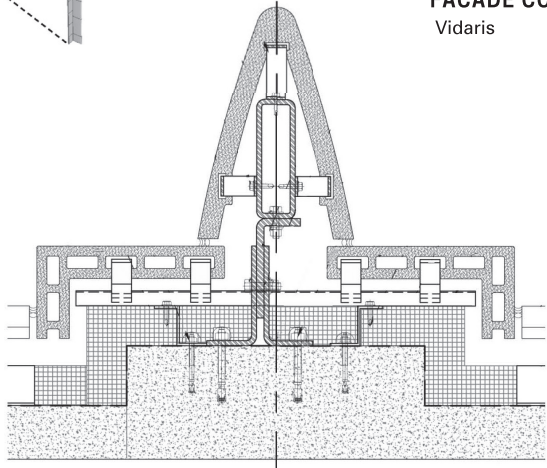
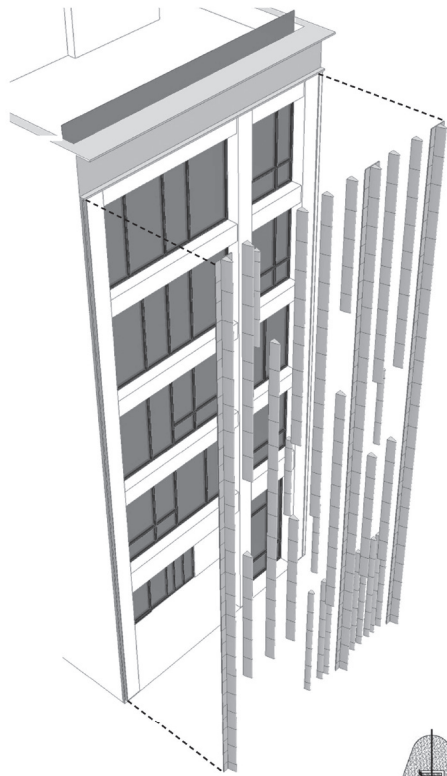
FIRESTOP
THE FIRESTOP AUTHORITY

Specified Technologies Inc. stifirestop.com

RIGHT, BELOW:
Custom glazed
terra-cotta
fins, provided
by Boston Valley
Terra Cotta
reflect the
mid-morning and
afternoon light
on 22nd Street.



© RAIMUND KOCH



DESIGN ARCHITECT:
BKSK Architects

ARCHITECT OF RECORD:
CetraRuddy Architects

FACADE FABRICATOR:
Boston Valley Terra Cotta

**CONTRACTOR AND
CONSTRUCTION MANAGER:**
Lend Lease

RAIN SCREEN SYSTEM:
Boston Valley Terra Cotta

CUSTOM STOREFRONT:
Coordinated Metals Inc., YKK AP
Custom Storefront System

ENTRY DOORS:
Dorma

STRUCTURAL ENGINEER:
WSP Cantor Seinuk

FACADE CONSULTANT:
Vidaris

Tempered glass
railing

Terra-cotta fin mounted
on steel frame, anchored
at slabs

Terra-cotta pier

Insulated glass
sliding door with
bronze framing

Terra-cotta
spandrel panels

ONE MADISON SQUARE GATEHOUSE

NEW YORK, NY

When creating the gatehouse to the CetraRuddy-designed 1 Madison Square tower on 23rd Street, BKSK partners and architects Harry Kendall and Joan Krevlin begged the question, “How do you design something that is as much about being a gateway as it is about being a building unto itself?”

The task was to create a five-story building to house the entry lobby and two duplexes. The two firms worked as a team: BKSK was brought in by Related, who purchased the building after

it was fully complete, with CetraRuddy acting as the architect of record and production architect for the residence.

Kendall and Krevlin ultimately imagined the entry structure as a giant front door. “22nd Street is a beautifully scaled block that has lovely stone and terra-cotta buildings. We wanted to do two things—design a building that actually felt as much like a gateway as a building, and we wanted to do something that was respectful of the nicely textured and well-scaled block.”

The team began to consider a contemporary material that would allow for such a combination, and considered it a good opportunity to use terra-cotta because of its malleability. “We looked at the block and the body material of most of its buildings,” said Krevlin, the partner-in-charge on the project. “We were pulling out the more decorative elements and having that act as the whole facade.” Krevlin and Kendall wanted some shimmer and reflectivity to the material to catch the morning

and Western light and knew that terra-cotta could be glazed to their specifications.

The terra-cotta fins are comprised of three pieces: The pointed piece is extruded and has a joint with two other flat elements. The fins are hung on an aluminum substrate that cantilevers off the building and attaches to the slabs so that they float in front of the glass. The fins were intentionally staggered to give the building rhythm. Behind the fins is a custom bronze and glass storefront with sliding glass doors. **BB**



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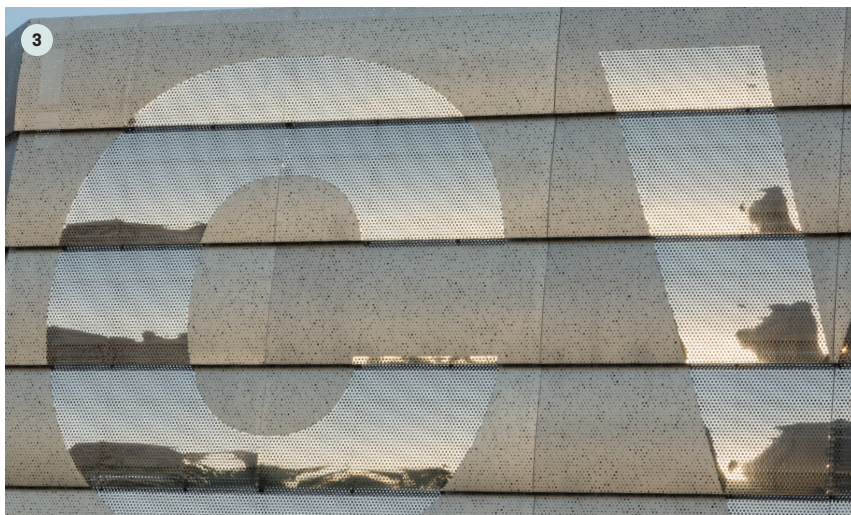
corian.com



Corian®

The new Motel One building by Mackay + Partners in the historic Minories neighborhood of the City of London features an illuminated façade made from Corian®. Photography courtesy of Mackay + Partners, all rights reserved.

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1 TRESPA PURA NFC DECORS TRESPA

At this year's IBS, Trespa released ten new colors and two new wood patterns to their Décor line. Each panel is made up of 70 percent natural fibers saturated with thermosetting resins with a closed surface to offer supreme weather resistance. Pura NFC can be applied both horizontally and vertically, whether side by side or in a lap pattern.

trespa.com

2 MODULO FUNDERMAX

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3 SELECTIVE POLISH ZAHNER

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azahner.com

4 ESCALE GOLDEN ANODIZED GKD

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gkdmetalfabrics.com



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shildan.com

2 VIRGOLA, LE PIETRE INCISE COLLECTION LITHOS DESIGN

Part of Lithos Design's original line, this collection now includes an array of graphic undulating patterns that provide a subtle optical illusion. The pattern is available on a variety of different stone slabs, which are machined flat. Virgola was inspired by the comma, and creates a repeating pattern that can be interpreted in many ways.

lithosdesign.com

3 SKYLINE VENTILATED FACADE SYSTEMS NEOLITH

Debuting at this year's AIA conference, SKYLINE is composed of four facade solutions manufactured with Neolith's lightweight sintered stone slabs. Ceramitex uses a rear-ventilated rainscreen that structurally adheres the slabs to an aluminum-framed system. StrongFix is the only hidden facade system with an invisible installation profile for 6-millimeter panels. It uses a vertical sub-framing that attaches to the surface of the building, and aluminum brackets attached to the backs of slabs so that they can be easily hung without the appearance of grout lines. There is also a visible mechanical fastening fixation composed of sustentation and retention brackets for vertical "L"-shaped profiles, as well as safety clips, which work with a variety of slabs.

neolith.com

4 HEWN STONE CULTURED STONE BY BORAL

Comprised of 54 percent pre-consumer recycled content, Hewn Stone is a high-quality manufactured stone product that is available in five different sizes and three natural color options. This product is easy to install and GREENGUARD Gold certified.

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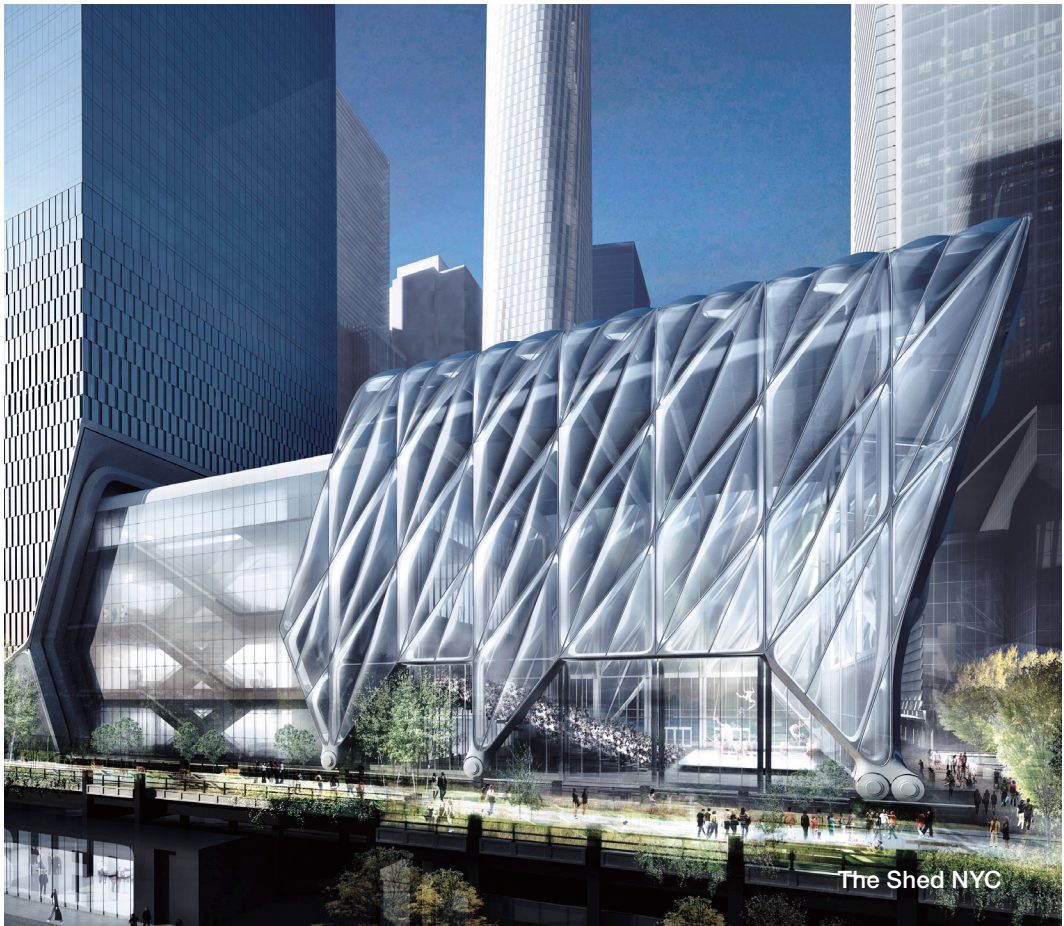
Roy and Diana Vagelos Education Center
Columbia University Medical Center

Photo ©Nic Lehoux



Grace Farms, the River building © Dean Kaufman

Grace Farms



The Shed NYC

Roy and Diana Vagelos Education Center Columbia University Medical Center

Design Architect: Diller Scofidio + Renfro
Executive Architect: Gensler

Grace Farms

Architect: SANAA
Executive Architect: Handel Architects LLP
Landscape Architect: OLIN

The Shed NYC

Architects: Diller Scofidio + Renfro,
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STRUCTURAL ENGINEER:

Equilibrium Consulting

BUILDING ENVELOPE CONSULTANT:

RDH Building Engineering

CONTRACTOR:

PCL Constructors Westcoast

BLINDS AND SHADES:

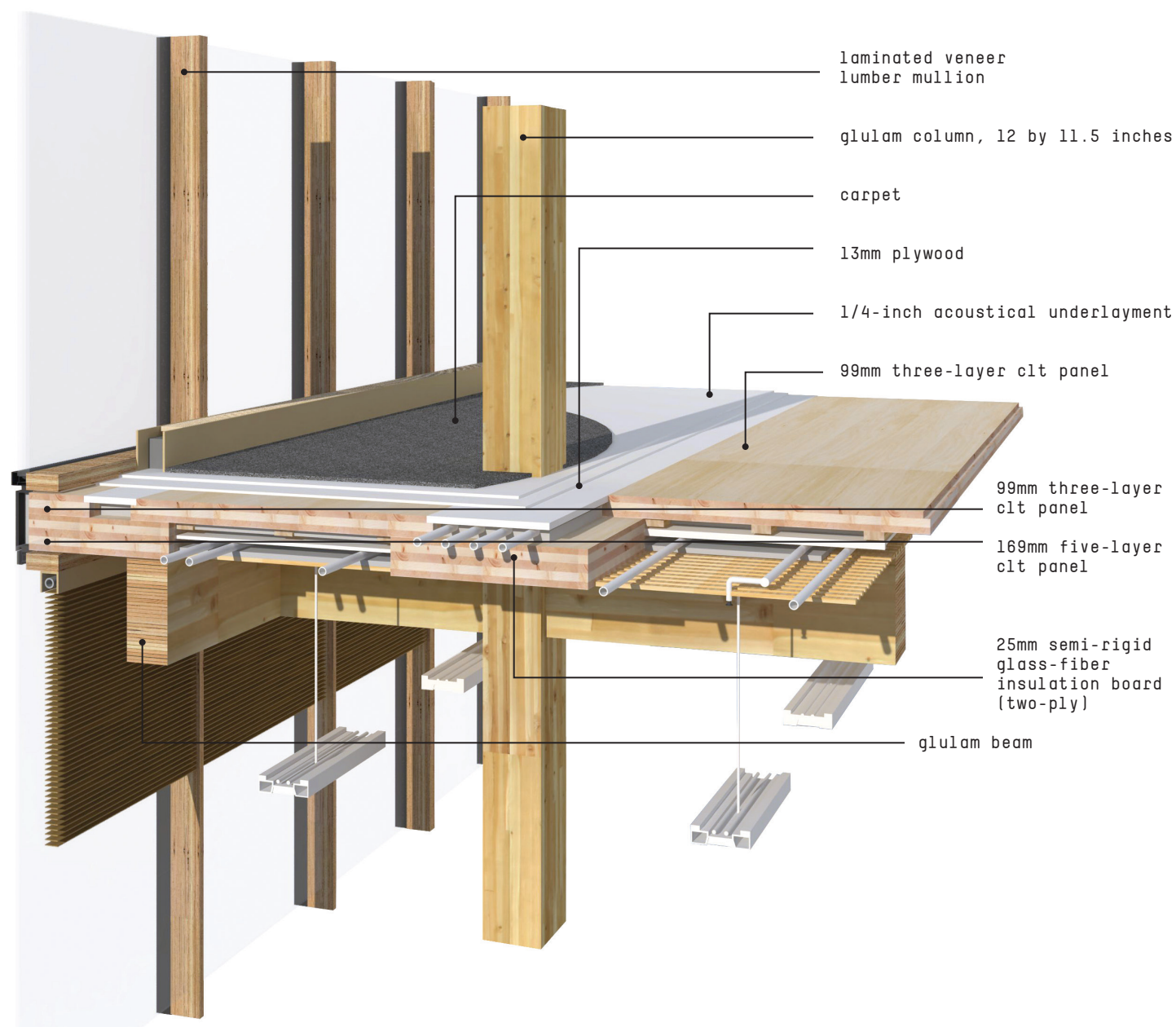
Hunter Douglas

STRUCTURAL INSULATED PANEL SYSTEM:

Insulspan

RIGHT: A section of the wood facade system made from laminated veneer lumber, glulam, CLT panels, and plywood.

BELOW: The Wood Innovation and Design Centre is a dry structure without any above-grade concrete slabs (except for one roof panel). The structure, designed by Michael Green Architects, houses the University of Northern British Columbia and Emily Carr University, as well as offices.



WOOD INNOVATION AND DESIGN CENTRE

PRINCE GEORGE, BRITISH COLUMBIA

Timber was the obvious choice for the Wood Innovation and Design Centre (WIDC). This sturdy carbon-storing material is increasingly an alternative to concrete or steel in midrises and “plyscrapers.” For the province-owned building in Prince George, British Columbia, mandated to use local products, Michael Green Architecture (MGA) won the competition with a “dry structure” using no concrete slabs above grade (except one small vibration-controlling roof panel, noted project manager Mingyuk Chen) and deploying wood everywhere from posts and beams to mullions.

The 97-foot-tall WIDC was North America’s tallest all-wood building when it opened in 2014. A site-specific code amendment allowed nonresidential construction for this project, recalled Chen. Its lowest three floors house programs of the University of Northern British Columbia and Emily Carr University, with wood-industry offices above.

Materials include cross-laminated timber (CLT), mainly Douglas fir, for floor panels, shear walls, core shafts, and

stairs; Douglas fir glulam for columns and most beams; laminated veneer lumber for the window mullions, entrance canopy, and feature stairs; parallel-strand lumber for load-transferring beams; and Western red cedar, charred and natural, for cladding. The facade, said principal Graham Finch of envelope specialists RDH, uses Kawneer curtain-wall units of aluminum veneer attached to wood framing, with high-performance triple glazing and irregular patterns varying from solar-gain-maximizing southern fenestration to prefabricated structural insulated panels on the north.

CLT is counterintuitively fire-resistant, Chen explained, needing no chemical treatment; if exposed to fire, it forms a carbon “sacrificial layer” slowing the char rate. On-site dampness mitigation poses minimal challenge, Finch said, noting that timber construction is widespread in Europe and ready for prime time here. “It forces you to go back to first principles and rethink... It’s not that it’s hard; it’s new, it’s unique.” Growing the WIDC’s materials, Finch added, took Canada’s forests under three minutes. **BM**

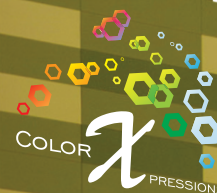


Marketplace Lofts - Studio [intrigue] Architects, LLC
Lansing, Michigan



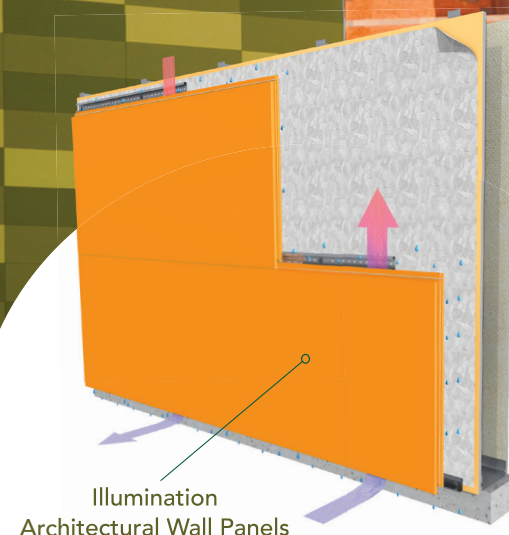
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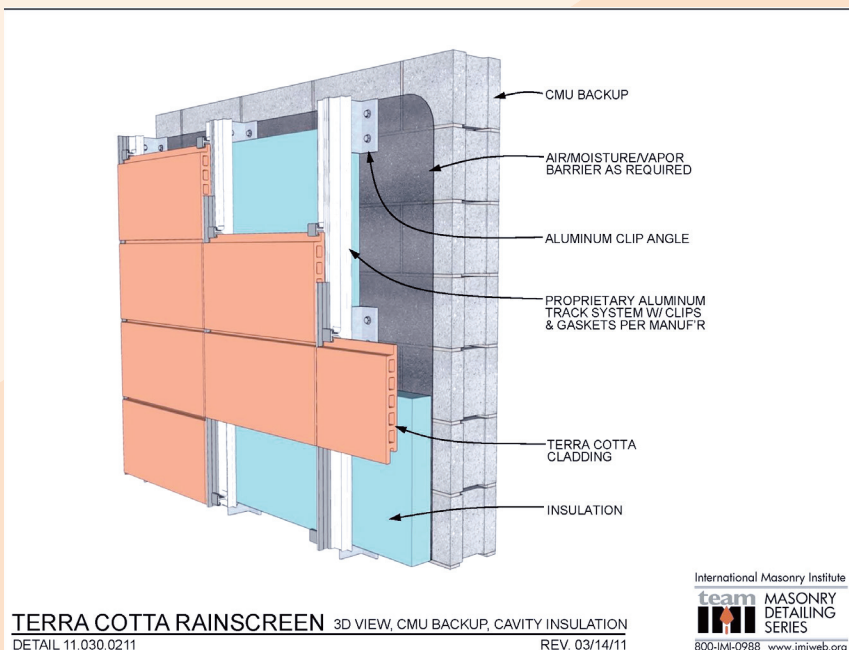
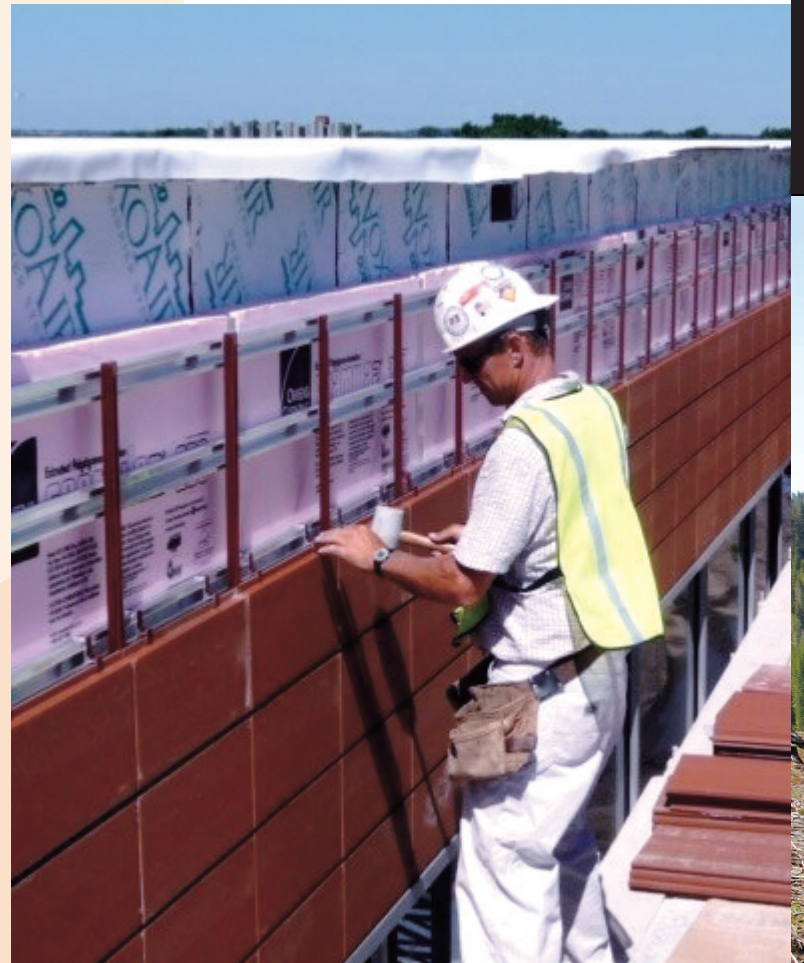
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Roxul
ROXUL is the North American operations of ROCKWOOL International, the world's largest stone wool manufacturer. It recently opened a 600,000-square-foot facility that will facilitate the growing demand for ROXUL product in the U.S. roxul.com

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Technoform Bautec
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CERAMICS, CONCRETE, AND WOOD

Boston Valley Terra Cotta
BVTC is the leading manufacturer of custom architectural terra-cotta for restoration of historic facades and creation of high performance building envelopes. The company has proven a commitment to quality over the last 120 years of business. bostonvalley.com

Dekton by Cosentino
A leader in the natural stone sector, Cosentino is the producer of Dekton, an ultra compact surfacing and cladding material that is a blend of the raw materials used to produce glass and porcelain as well as the highest quality quartz surfaces. dektion.com

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Neolith by TheSize
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NBK Ceramic
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Porcelanosa
In addition to ceramic tile and hardwood for interior uses, this company produces rainscreen ventilated facade systems for porcelain and solid surfaces, and bonded facades for porcelain tiles or solid surfaces, or raised access flooring for exterior and interior applications. porcelanosa-usa.com

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Prodema has updated the age-old experience of wood-working, adding a large dose of state-of-the-art technology, to create an original and avant-garde range of natural wood products for the world of architecture. The products are notable for their appearance, quality, range, and above all, durability. prodema.com

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Shildan produces terra-cotta rainscreen and sunscreen products for energy efficient building facades. Its Alphaton panel is made from extruded double-leaf terra-cotta strengthened by a chain of internal I-beam supports. shildan.com

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product of choice by many architects, general contractors, engineers, interior designers, and developers throughout the world. terracorepanels.com

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Swisspearl develops innovative and sustainable products made of natural materials for use in the building envelope, interior design and the garden, having mastered the highly demanding production processes for integrally colored cement composite panels. The company has more than 60 contractual partners in over 50 countries, ensuring its proximity to customers. swisspearl.com

Trespa
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Cricursa
Providing sophisticated glass solutions, this Barcelona-based company produces curved and flat interior and exterior glass as well as decorative, safety, and energy-efficient glass. cricursa.com

ES Windows
This South American company manufactures, distributes, and installs aluminum and glass windows, doors, and curtain walls to national and international locations. tiswcorp.com

Guardian Industries Corp.
Guardian manufactures float and fabricated glass products for commercial, residential and interior applications. Guardian SunGuard® Advanced Architectural Glass and Glass Analytic tools provide facade solutions that allow architects and designers to explore all the aesthetic and functional possibilities of building with light while meeting increasingly complex energy, daylighting, LEED and performance requirements. guardian.com

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JE Berkowitz fabricates architectural glass products, including insulating, heat-treated, silkscreen, and spandrel glass, laminated glass, all-glass doors and entrances, and point-supported glass systems and canopies. jeberkowitz.com

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Pulp Studio, a pioneer in the glass industry, has been committed to the manufacturing of specialty glass products since 1996. The Los Angeles-based company is recognized for producing superior architectural glass. pulpstudio.com

SaftiFirst
SAFTIFIRST is a leading USA manufacturer of fire-rated glazed walls, openings, and entrances. We are the only single-source USA manufacturer of fire-resistive glass and framing systems. Our products are listed by UL and

Intertek/WHI from 20 minutes to two hours. SAFTIFIRST also distributes PYRAN Platinum fire rated ceramics in North America. safti.com

SageGlass
SageGlass makes glazing that goes from clear to dark with the flip of a switch, letting natural light fill a building or blocking out unwanted heat gain depending on the needs of the user. sageglass.com

sedak
A premium supplier of insulating glass and safety glass with maximum formats. As the global leading glass finisher, the company provides panes with measures up to 3.2m by 15m: processed, toughened, laminated, imprinted, coated, and insulating glass. sedak.com

STI Firestop
Specified Technologies Inc. (STI) is a leading manufacturer of innovative firestop solutions designed to stop the spread of fire, smoke, and toxic fumes. With over 1,300 UL® Classified systems, STI specializes in cutting edge perimeter fire containment systems including backpan designs, flush and reduced sill heights, and connection protection. stifirestop.com

Tecnoglass
Tecnoglass is a fully integrated group of companies including Tecnoglass SA, ESWindows and Alutions, which offer the latest technology on glass, aluminum frames, facades and window systems. These companies employ over 5000 people and sell to 27 countries, providing single source responsibility in all their products. tecnoglass.com

View Inc.
View Inc. is the pioneer in large-scale architectural dynamic glass. View designs and manufactures dynamic glass that intelligently adjusts its tint levels. View Dynamic Glass enables unparalleled control over the amount of light and heat entering a building—dramatically increasing comfort while reducing building energy consumption. viewglass.com

Viracon
This architectural glass fabricator recently launched a new product, VUE-30, a high-performance glass coating that allows for enhanced visible light transmittance and enables architects to maximize window-to-wall ratios while meeting and exceeding domestic energy code requirements. viracon.com

Vitro
Vitro Architectural Glass (formerly PPG glass) is the largest glass producer in North America. Vitro Glass is primarily focused on commercial and residential construction markets and produces industry-leading glass brands such as Solarban® solar control low-e glass, Sungate® passive low-e glass and Starphire Ultra-Clear™ glass. vitroglazings.com

W&W Glass
This New York-based metal and glass company provides solutions for the most demanding architectural projects through the Pilkington Planar System, which provides a complete glass envelope for curtain walls, storefronts, skylights, and other building structures. wwglass.com

METALS, MESH, TENSILE FABRIC, AND ALUMINUM

Alcoa
This manufacturer of aluminum composite material and painted aluminum sheets has recently developed a new process in which EcoClean, a titanium dioxide coating, is applied to the pre-painted aluminum surface of Reynobond, making it the world's first coil-coated aluminum architectural panel that actively works to clean itself and the air around it. alcoa.com

Alumil
With 30 years of experience, Alumil is one of the most advanced companies globally in the design and production of aluminum extrusion products with state-of-the-art production lines in all its factories. alumil.com

Cambridge Architectural
Cambridge specializes in the production of woven metal mesh, a durable and sustainable architectural component that is customized to suit an architect's vision for any type of project. cambridgearchitectural.com

C.R. Laurence
The leading supplier and manufacturer of products to the glass and glazing industry. C.R. Laurence designs, engineers, and manufactures a wide range of architectural hardware. The U.S. Aluminum Division manufactures and supplies a complete range of products for commercial, institutional, retail, and government buildings. crlaurence.com

EFCO
EFCO's products and professional services provide innovative customer solutions to satisfy commercial design challenges from historical replication to cutting-edge new construction. Our wide breadth of products allow flexibility to meet project requirements from superior thermal performance to impact and blast requirements for aluminum windows, curtain wall, storefront, and entrances. efccorp.com

GKD
One of the nation's leading metal fabrication companies, located in Cambridge, Maryland, GKD specializes in advanced weaving technology. It offers an extensive selection of weave patterns that will satisfy any project's needs. gkdmetalfabrics.com

greenscreen
Since 1993, this company has produced a welded wire trellis system. Using attachment clips, the panels can attach to a building facade and span openings between floors or horizontally between posts. greenscreen.com

Metalwërks
Metalwërks is a second-generation, family-owned product manufacturer and specialty contractor of architectural metal cladding and ornamental metal. Metalwërks partners with architects, contractors, and owners to bring their visionary designs to life with precision engineering, fabrication, and installation. metalwerksusa.com

POHL
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Rigidized Metals Corporation
Rigidized Metals combine functionality and durability with beautiful finishes and rich textures to create three-dimensional metal panels perfect for architectural, industrial, and transportation applications. rigidized.com

Sapa
Sapa Extrusions is North America's leading producer of extruded aluminum. We offer the industry's broadest product capabilities in press sizes and tonnages, alloy selection, circle sizes, and profile types. sapabuildingsystem.com

Schüco
Schüco provides state-of-the-art window and façade technology tailored for all market sectors, from private homes to commercial and industrial projects. To achieve this, a broad product portfolio consisting of high quality materials is needed. Schüco systems meet and exceed the most demanding requirements for energy efficiency, security, comfort, and design. schueco.com

Spectrum Metal Finishing
This Ohio-based metal coatings company specializes in the electroplating and electrodeposition of many precious and semi-precious metals using a liquid and powder coating system. spectrummetal.com

Vitrocса
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YKK AP America
YKK AP assists in achieving LEED certification with products like the recently launched enerGfacade series, featuring ThermaShade sunshades, the industry's only sunshade system with a thermal barrier. ykkap.com

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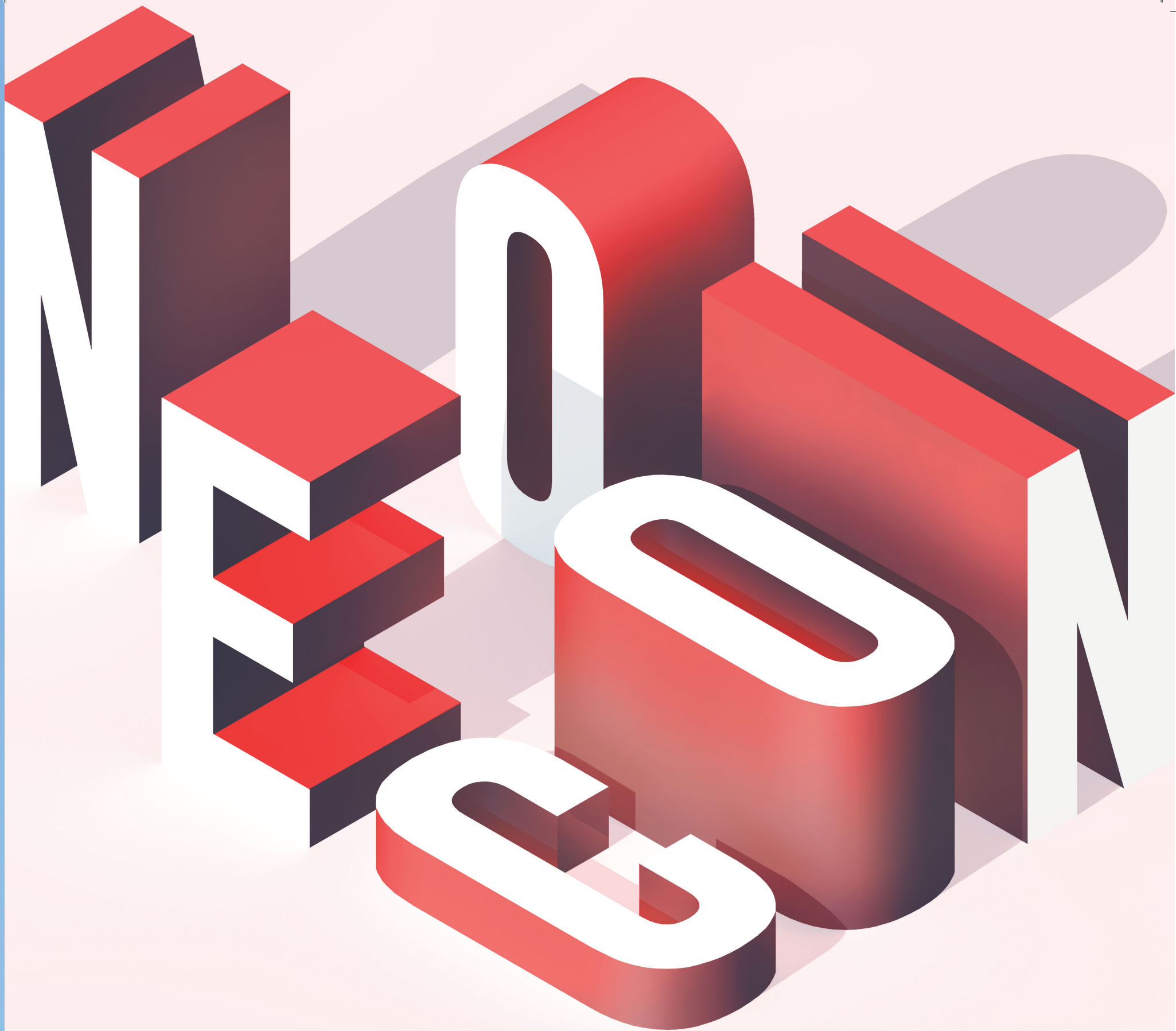
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APRIL

THURSDAY 27

KEYNOTE

Alejandro Aravena, Francis Kéré, Elizabeth Diller, and Michael Murphy
Anticipate Need: Design That Cares
8:30 a.m.

TOURS

Walt Disney World's Keys to the Kingdom Tour
8:30 a.m.

Behind the Scenes at Disney's Animal Kingdom
9:00 a.m.

SEMINARS

Paul Corrado, Zena Howard, and Benjamin Rosenberg:
Problem-Solving Collaboration: National Museum of African American History and Culture
2:00 p.m.

Lynn McClure and Richard Wilson
Positioning Pullman: AIA Design Advocacy in Action
7:00 a.m.

Lynn Petermann, Andrea Love, and Vikram Sami:
Optimizing Facade Performance: A Deep Dive on Design Decisions
2:00 p.m.

Ron Haase, John Howey Lawrence Scarpa:
Florida's Forgotten Modernism: Beauty, Performance of Florida's Vernacular, Contemporary Architecture
2:00 p.m.

Joel W. May and Michael Rimoldi:
#HurricaneStrong in Breezy Point: Building Back Through Partnerships and Collaboration
4:00 p.m.

Raul Alvarez, Victor Deupi, and Angel C. Saqui:
Cuba Architecture, from Colonial to Modernism: Current Trends and Opportunities
4:00 p.m.

EVENT

Emerging Professionals Party
8:00 p.m.

FRIDAY 28

KEYNOTE

Michael Beirut, David Delgado, and Dan Goods:
Anticipate Challenge: Design That Overcomes
8:30 a.m.

SYMPOSIUM

Robert A. M. Stern:
Topaz Medallion Symposium: Architectural Education and the Profession
2:00 p.m.

SEMINARS

Lawrence W. Speck:
Ten Cardinal Rules for Talking to Non-Architects About Architecture
3:30 p.m.

Billie Faircloth, Chris A. Hudson, Anne Schopf, Z Smith:
Succeeding with Research: How to Successfully Integrate Research into Practice
3:30 p.m.

Christopher P. Martersteck
How to Be a Successful Designer in a Design-Build World
5:00 p.m.

Laura Heim, Jeffrey Kroessler, and Elizabeth Plater-Zyberk:
From Sunnyside to Seaside, Garden Suburb to New Urbanism
5:00 p.m.

EVENT

The Party!
7:00 p.m.

SATURDAY 29

KEYNOTES

Cheryl McAfee, Nóra Demeter, Michael Ford, and Frances Anderton:
Anticipate Need: What's Next in Architecture
12:30

Amy Cuddy
Anticipate Change: Design That Evolves
12:30 p.m.

SEMINAR

Steve Biegun, Richard Embers, Callum Vierthaler:
Virtual and Augmented Reality as Impactful Communication Tools
2:30 p.m.

FILM

Eero Saarinen: *The Architect Who Saw the Future With Filmmakers Peter Rosen and Eric Saarinen*
2:30 p.m.



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EMILIO SANCHEZ IN SOUTH FLORIDA COLLECTIONS

Lowe Art Museum, University of Miami
1301 Stanford Drive
Coral Gables, Florida
Through May 21, 2017

Emilio Sanchez in South Florida Collections marks the artist's first show in South Florida in over a decade. The Cuban-American painter's work is largely centered on his time in Cuba and the Caribbean and, later on, in New York City. His paintings depict the vernacular of his surroundings, often finding inspiration in existing structures and scenes and transforming them into abstract and surreal portraits.

"His keen eye and remarkable ability to edit out incidental elements and details imbue the work with a dreamlike quality, as if the buildings he depicted existed in a parallel universe born of memory, longing, and imagination," said co-curator Victor Deupi, an architecture scholar, in an interview with *Cuban Art News*.

The exhibition encompasses six decades of Sanchez's professional career, displaying paintings from the 1940s through the 1990s. Alongside his paintings, the museum will display sketchbooks, doodles, and other personal documents to paint a better picture, if you will, of this artist's prolific work.

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COURTESY THE BACARDI ARCHIVE

From its 1862 origins in Santiago, Cuba, Bacardi has grounded its identity through architecture—whether in utilitarian distilleries and factories or in more aesthetic offices and showrooms. Allan Shulman's *Building Bacardi: Architecture, Art & Identity* traces the beverage empire's affair with design beginning in 1800s Cuba, its migrations to the United States and throughout Latin America, and into new facilities in Europe after the turn of the century. Throughout these moves, Shulman contends that the company's image and brand determinedly combined contemporary and vernacular elements.

Shulman lays the foundations for Bacardi's architectural ambitions in the competition for the Bacardi Building in Havana. Located in the colonial heart of the capital, the building took a turn for the modern in 1930 when the winning architects, Esteban Rodríguez-Castells and Rafael Fernández Ruenes, changed the facade during construction from Renaissance Revival to a more contemporary art deco. Yet distinctly Cuban elements were incorporated, such as leaded glass, louvered windows, and local colors and patterns, to provide the building with a local identity. A visual landmark, the tower's predominant

function was the tasting room, a cocktail bar that catered to the largely American Prohibition-era clientele.

In post-Prohibition New York in 1933, this modern-vernacular mix imbibed a Cuban flavor. Morris Sanders designed the new Bacardi Bar, which would take up space in the historic New York Club. The bar featured white leather focal points in an otherwise dark space, with a backdrop of a somewhat satirical mural by William Gropper to drive home the Cuban sensibility. A similar tactic was employed in 1938 for the Bacardi Room in the Empire State Building. Designed

by Franklin Hughes, the space on the 35th floor was inwardly focused, with wooden screens blocking outside views; in their place, a mural by Antonio Gattorno, *Waiting for Coffee*, depicted a pastoral scene of sugar cane fields.

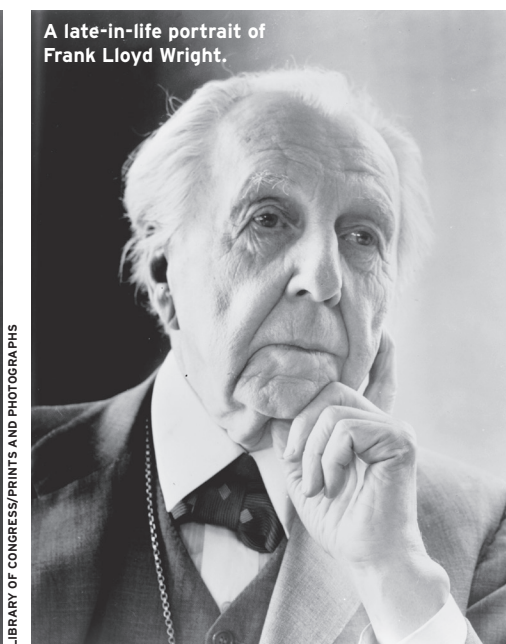
While Bacardi's architectural style vacillates from utilitarian to expressive, it was never left to chance. Bacardi created its facilities by interpreting the local style through modern design and construction, a hybrid that often resulted from mixing local and international architects. Much of this mix appears in the wonder years of 1944 to 1977 when Bacardi was led by Jose Mario "Pepin" Bosch, who thought of himself more as a patron than a client. The breadth of architects and designers included under his reign certainly attests to this.

Native Cubans led the early work. Enrique Luis Varela designed the Modelo brewery near Havana and laboratories in Santiago in 1948. Ermina Odoardo-Ricardo Egulior Arquitectos designed an addition to a plant in Santiago in the 1950s, as well as the Bacardi International Limited Building in Bermuda in 1972. In 1954 Sáenz, Cancio & Martín (SACMAG), appearing as both design engineer-architect and architect of record throughout Bosch's tenure, developed a master plan for the new headquarters near Santiago along the central highway for its "modernity, mobility, and connectedness," themes that pervaded Bacardi's ethos. In 1956–57, Bosch commissioned Philip Johnson for a private residence and Ludwig Mies van der Rohe for an administrative

building. Both went unbuilt under Cuba's growing political tensions. Shulman argues that the Mies van der Rohe's design reappeared somewhat modified as the Neue Nationalgalerie in Berlin.

Though aligned with the Cuban Revolution, by 1960 the company's assets in Cuba had been nationalized, and Bacardi exiled. But, in 1936, Bacardi had expanded to Puerto Rico to capitalize on being in a U.S. territory as Prohibition ended. A new campus with the main plant designed by Toro y Ferrer Arquitectos was constructed there in 1954. Construction increased after exile, including an expressive canopy-structure pavilion by SACMAG in 1962, and the Foyer Museum and Bottling Plant in 1965 by Miguel Rosich and Ignacio Carrera-Justiz. Félix Candela was tapped for an unbuilt warehouse design. Instead, he completed multiple commissions in Mexico. In Tultitlán, Mexico, Mies van der Rohe, with SACMAG as the architect of record, designed the company's administrative building in 1958.

One of Bacardi's more dynamic duos appears in Miami. In 1963, SACMAG's seven-story Bacardi Imports Tower rose as a small service core to support a large truss from which the rest of the building hangs. An antithesis of the modern corporate office building, the lobby was moved to the second floor and the plaza level was a gallery. Shulman points out a striking similarity in the urban plan of the tower set back in a public plaza to Mies van der Rohe's Seagram Building completed in 1958. A decade later, a smaller "mushroom" building—an **continued on page 74**



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LIBRARY OF CONGRESS/PRINTS AND PHOTOGRAPHS

As heroes need rivals, winners require competitors. Champions stay on top only when challenged. The status quo in any area of human endeavor lasts only when staving off oncoming alternatives. While change comes eventually—whether gradual or abrupt, graceful or under siege—habit, doctrine, or tyranny often stall its advent, and when change does come, it is often less than complete. Historic practices and traditional principles underpin progress with lingering connectivity: What's best from the past informs progress or even pulls it back from misguided tangents when the test of time delivers a failing grade, like elevated highways slashing the urban fabric only to be cursed later as killers of community.

The stakes of such successive challenges to established orthodoxy are especially high in architecture, the most public of artistic disciplines. Shifting design solutions shape the bedrock business of construction and the lives of end users regardless of the relative awareness of polemical origins. Along the way, land-use regulations and profit seek to play their according roles, making change all the tougher.

Such a contentious continuum sets the historic stage for Hugh Howard's lively depiction of the professional and theoretical rivalry of the two most renowned American architects of the 20th century: Frank Lloyd

Wright and Philip Johnson. Early on in this all-too-rare design-professional page-turner, Howard sums up his premise: "They shared a deep commitment to the cause of architecture, but the two could have hardly been more different, separated as they were by age, region, and sexual orientation... the yin and the yang. In love and in hate, the positive and negative charges that gave architecture its compass."

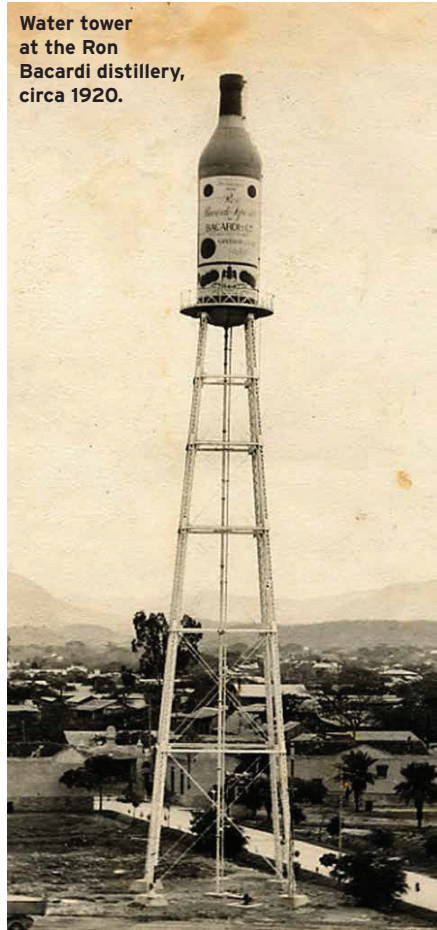
The reader might emerge wondering if at times the book tries too hard to portray a tense, ideal dual-personification of a central axiom of the 20th century's design evolution: The Romantic (Wright) versus the Modern (Johnson), informed as capital "M" Modernism often was at its applied outset by an "enduring fondness for the classical."

Yet the effort proves pleasurably worthwhile as a way to chronologically measure two legendary careers, enhanced by their silver-tongued exchange of competing visions. A shared penchant for righteous control loosened as their long careers unfolded, if more in deeds than in words. Theirs proves an oddness of mutual gain.

Their rivalry's defining crucible, as Howard reveals it with justified relish, is MoMA's fabled 1932 *Modern Architecture: International Exhibition*, organized by the precocious (and independently wealthy, thereby prematurely well-connected) **continued on page 74**

PARADOXICAL PAIRING

Architecture's Odd Couple
Frank Lloyd Wright and Philip Johnson
Hugh Howard, Bloomsbury Press, \$19.99



Water tower at the Ron Bacardi distillery, circa 1920.

COURTESY THE BACARDI ARCHIVE

CUBA LIBRE continued from page 78 administration annex—designed by Carrera-Justiz appeared. The tower was faced with dark glass on the longer sides, while the short sides featured blue and

white stone and tile murals. The annex took this a step further and faced the entire building with hammered colored glass set in epoxy. The design by Johannes Dietz gives the mural a magical lantern effect.

Following Bosch's retirement in 1976, Bacardi focused on its individual brands and new acquisitions. It wasn't until the mid-1990s that attention to facility design reemerged. Bacardi began renovating historical structures as it had done in the past, with a hospital in Puerto Rico in 1939 and a Spanish monastery in 1975. With new renovations in Juillac-le-Coq, France, and Aberfeldy, Scotland, the most spectacular of the new era is Heatherwick Studio's renovation and glasshouse enclosures for the Bombay Sapphire distillery on the site of former mills in Laverstoke, England. Here, the modern and vernacular complement more than mix.

The portfolio-sized book shows what it tells. Full-color photos, drawings, historical documents and Bacardi paraphernalia follow the text. However, calling it a coffee- or cocktail-table book would do little service to Shulman's research, which is thorough without being too technical for non-architects. The design coverage is comprehensive, yet succinct. The large images make it easy to flip across the book's geographic organization, and a timeline is included. While the history of Bacardi is shown broadly, those wanting more are directed by an extensive set of endnotes and bibliography.

JAMES WAY IS THE MARKETING MANAGER AT ZGF ARCHITECTS AND WRITES ABOUT DESIGN AND ARCHITECTURE.

PARADOXICAL PAIRING continued from page 78 26-year-old Johnson, along with certifiable scholar Henry-Russell Hitchcock.

In a none-too-soon nod to the European upheaval in design, museum founder Alfred Barr gave the go-ahead, asking only for some trace of American participation. Despite joint skepticism and caustic distrust, Johnson and Wright finally cooperated with a never-built plan called "House on the Mesa." MoMA visitor traffic received a boost from the inclusion of the best-known stateside practitioner, and an inspired Wright emerged newly invigorated, with the modernist masterpiece of Fallingwater carrying straight through to the final assignment of the Museum of Non-Objective Art (the Solomon R. Guggenheim Museum). The currency of polemical sparring started to pay rich creative dividends for all, no less than for Johnson himself who emerged as America's official boy genius of design connoisseurship.

After his German flirtation with fascism and architectural studies at the GSA, Johnson took his place as Wright's closely watched rival practitioner as well as critic, with his 1949 Glass House in New Canaan and the philosophical crossfire that it refreshed, according to Howard.

Howard quotes Johnson in response to Wright's dismissal of the Connecticut retreat: "Was he born full-blown from the head of Zeus that he could be the only architect that ever loved or ever will?" Contrary to Wright's insistence on originality, Johnson made no bones about his distilled use of precedent ranging from

Ludwig Mies van der Rohe to Andrea Palladio, who likewise reacted to site in a "formal way that alludes to the classical past."

What Wright denounced as a mere box or "monkey cage" instead took its enduring place. It represented not only the International Style taking further hold of America's design imagination and marketplace, but also an architecture based upon ideas and historic interplay: the midwife of modernism. Howard summarizes, "Johnson wrote few melodies but he was a great orchestrator...with the application of a critical and evaluative intelligence rather than the inventions of an inductive creative imagination."

This tension of romantic originality and New World self-assurance versus the cerebral, globally ecumenical distillation of built excellence both past and contemporary defined the core theoretical crosscurrent during "The American Century." Howard's pairing succeeds at personifying this central debate, concluding: "Rather against his will, Johnson evolved into one of Wright's most important public admirers. As a man who worshipped zeitgeist, he found that his old nemesis's ideas retained remarkable vibrancy...work that transcended style and even time."

Like the interpersonal artistic skirmishes enlivened recently by Sebastian Smee in *The Art of Rivalry*, attention should be given to a book that offers such engaging access to architectural theory and its visible results as sources for future impulse.

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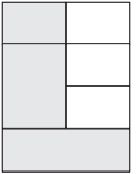
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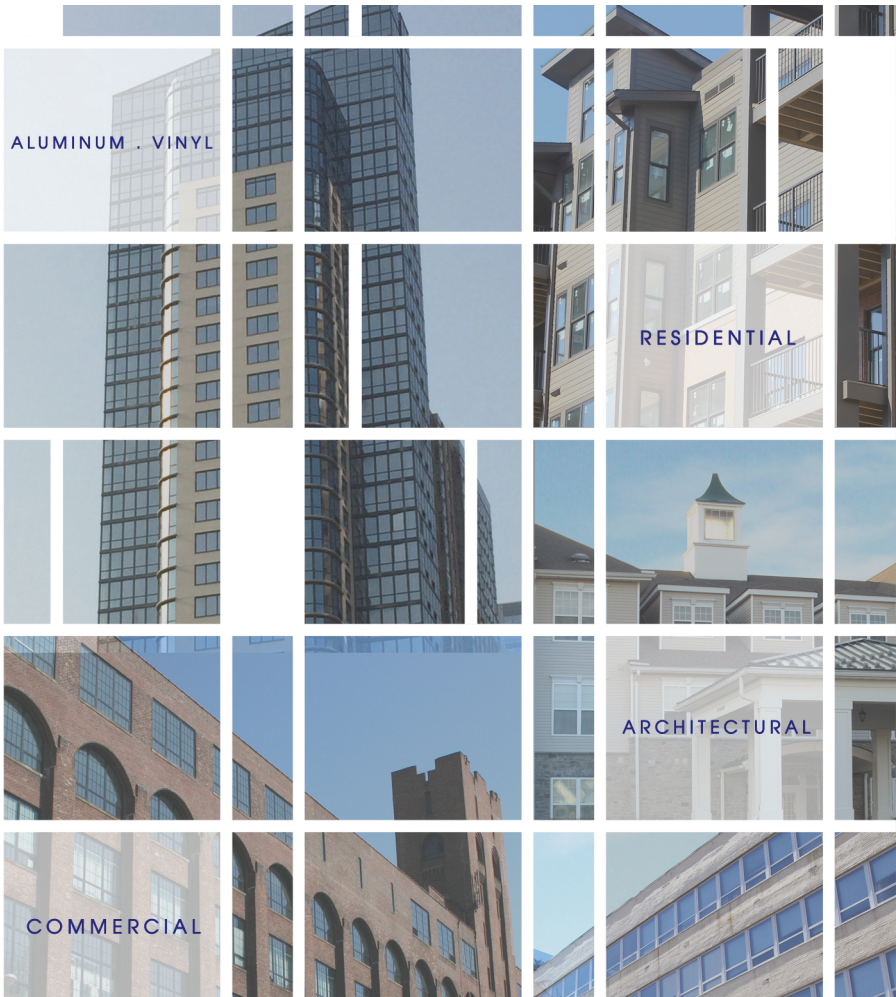
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JOHN SCHIFF *Odd and Unaccountable* monotype 22" x 30"



COURTESY KEITH KRUMWIEDE

Americans define themselves through work; it builds character, or so we believe. The American Dream is premised on individual achievement, with the promise that our labor will be rewarded and measured by the things we collect and consume. For many, the sine qua non of the dream, our greatest collectible, is the single-family house. Of all our products, it is the one we most rely upon to represent our aspirations and achievements.

Throughout the history of our republic, the idea—promoted from the beginning by the likes of Thomas Jefferson, heir to Palladio and father of the American suburban ideal—of living in a freestanding house in the middle of one's own personal Eden has been the dream of generation after generation of Americans. So while it was possible for Le Corbusier to say, in Paris near the beginning of the last century, that "A house is a machine for living," from our perspective, on this side of the Atlantic and on this side of the 20th century, it would be better to append that famous maxim: "A house is a machine for living the American Dream." At this point in history, this statement seems entirely self-evident but still we are reminded by our leaders to get our piece of the dream. In promoting his vision of an "ownership society" in a speech at the St. Paul African Methodist Episcopal Church in Atlanta in 2002, President George W. Bush said, "I do believe in the American Dream.... Owning a home is a part of that dream; it just is. Right here in America, if you own your own home, you're realizing the American Dream." And during the early years of the new century, the economy soared as millions of wood-framed dreams sprang up across the country, enabled by an elaborate new financial calculus cooked up by Wall Street.

But then the magic formulas—which scripted the construction and consumption of ever-larger houses in ever increasing numbers by bundling our dreams together into

tradeable units—began to fail. The dream quickly became a nightmare. As the legitimating environmental, economic, and socio-political narratives that for so long sustained the endless reproduction of suburbia began to collapse, it became clear that the suburban house, rather than the manifesting of our achievements, masked our delusions. According to the historian John Archer, "the romanticized isolation of the individual (or nuclear family unit) in a manufactured Arcadian preserve is an increasingly untenable fiction."

The myth that we all stand alone, propelled by our own initiative and hard work is part of that fiction. Suburbs, and the detached single-family houses of which they are comprised, reinforce it. They work to isolate and separate us, to dislocate us as individuals, detached from any larger heterogeneous collective body. The common cul-de-sac is, both literally and symbolically, the end of the road, a terminus in a system. Safely sequestered within its four (or eight, or sixteen, or thirty-two) walls, we stand apart from the crowd, reaching out through an array of devices to make contact with those who are, more or less, just like us. Space becomes less a medium in which we mix and more a barrier that insulates us from those unlike ourselves. And as houses balloon in size, this sense of disconnection is amplified within the walls of the house itself, with each inhabitant withdrawing to ever more far-flung and insular domestic realms.

The social and political consequences of this withdrawal are increasingly obvious in the deterioration of a civil society and the erosion of civil discourse. The further we live from each other, the less we are capable of seeing each other as people with shared dreams and struggles and the more likely we are to see an other, unlike us, whom we fear and demonize. The evidence of this is clear in the last election, in which President Donald Trump's campaign of xenophobia

claimed the most votes, according to the Washington Post, in our suburbs, small cities, and rural areas. As our houses spread out—as the distance between us increases—we vote more myopically to protect our own perceived interests (and the interests of those we see as like us) at the expense of what is arguably the greater collective good.

But is the detached house, with its resulting social detachment, a prerequisite of the American Dream? Is it possible to imagine other futures for the dream and, consequently, other futures for dwelling? What would happen if personal happiness were no longer so closely tied to economic success derived from the fruits of one's labor? These are questions we would do well to consider. Jobs are disappearing. And while presently most of us still need—and may even want—to sell our labor, it is becoming clearer that with each passing day there will only be fewer buyers. Our relationship to work, and therefore to the American Dream, and therefore to our manner of dwelling, and therefore to politics, is changing.

According to the network theorist Geert Lovink and the political activist Franco Berardi, the capitalist promise of "full employment turned out to be a dystopia: there is simply not enough work for everyone.... Zero work is the tendency, and we should get prepared for it, which is not so bad if social expectations change, and if we accept the prospect that we'll work less and we'll have time to think about life, art, education, pleasure, love, and what have you rather than solely about profit and growth." Our current world is built on a foundation of profit and growth. Our urbanism—and the infrastructure and architecture with which it is constructed, including the tens of millions of homes spread thin across the landscape—is the result of a centuries old economic system. And that system has consistently sought to segregate sites of labor and production from

sites of dwelling. The single-family house in a suburban bedroom community along a congested commuter route is the product of a capitalist system in which we head out each day to sell our labor in an indifferent market, returning as night falls to replenish our energies and reclaim our identity.

As the market for labor decreases in an increasingly automated world, we need to begin thinking about the consequences and benefits of a future without work, or, more accurately, with far less wage-earning work. Even now we can see that a shift is occurring. The recent collapse of the distinction between places of work and living is both a symptom of the underlying economic and technological transformations that are reshaping work as we know it and a sign that points toward other ways of dwelling. Out of necessity, and, in many cases, desire, people are beginning to experiment with other ways of living, coming together to form new (or new again) types of shared live-work households. And as the tendency toward zero work increases, we will all need to rethink the way we live. Because if we take the classical definition of work out of the equation, the whole structure of our cities, as well as our manner of living, makes a lot less sense.

Already, this probability is leading economists, technologists, and political scientists—but sadly few politicians on either the left or the right—to speculate on the structure of society in the future. A key question is how people will sustain themselves without jobs. There are renewed calls for a universal basic income by tech-leaders like Elon Musk (or a universal basic dividend suggested by Greek economist and politician Yanis Varoufakis); Bill Gates has even suggested that we have an income tax on robots. In any case, a new economic model—which will, necessarily, be accompanied by a new political order—in which we are freed from the obligation to sell our labor in order to survive will require that we consider other conceptions of human productivity, other forms of human association, and of course other ways of living.

In such a future, the American Dream, as it is currently defined, would have no utility. But how would we organize our lives in a world where we work less? What would we do? How would we live? In his essay "Fuck Work," the historian James Livingston points toward an answer when he asks, "How would human nature change as the aristocratic privilege of leisure becomes the birthright of all? As architects, seeking a way forward, we might ask a different version of Livingston's question: How would human habitats change, as the privilege of leisure becomes the birthright of all?

Liberated from the idea that our

dwellings must be understood as freestanding castles, as isolated retreats from society through which we represent our individualism and secure our market share, we could instead conceive of assemblages of dwellings that collectively define a domain of mutual cooperation, interaction and civil discourse. We have counter histories of dwelling that offer us guidance in thinking about other possible domestic orders. In 1886, Jean-Baptiste Godin, the French industrialist who built the Social Palace at Guise, wrote that when "constructed with a view to unity of purpose and interests, the homes, like the people, approach each other, stand solidly together, and form a vast pile in which all the resources of the builder's art contribute to best answer the needs of families and individuals." And following this, we might allow ourselves to imagine—as a way of shaking off the dust of the 20th century—living in what the social reformer Robert Owen described as a "magnificent palace, containing within itself the advantages of a metropolis, a university, and a country residence, without any of their disadvantages, ...placing within the reach of its inhabitants ... arrangements far superior to any now known ... [nor] yet possessed by the most favored individuals in any age or country."

Of course, the American Dream can't be transformed overnight. There are aspects of it that are deeply embedded in our collective consciousness. At its core, the dream is about security, comfort, and familiarity, as much as it is about aspiration, accomplishment, and status. Any new ideas about the way we live, if they are to dislodge us from our long-habituated connection to the single-family detached house, must be accompanied by new architectural models and delivered through compelling new narratives that situate the needs and desires currently manifest in the house within new patterns that make collective life more desirable.

This may seem to be yet another call for a utopia, and therefore criticized as being divorced from the pressing concerns of the real world. It is not. For as Lewis Mumford said, "the prospects of architecture are not divorced from the prospects of the community. If man is created, as the legends say, in the image of the gods, his buildings are done in the image of his own mind and institutions." The real world is changing rapidly all around us; meanwhile we cling to increasingly outmoded dreams. In the future, if we hope not only to survive but also to thrive, we'll need to change our minds and rethink our institutions. We'll have to prioritize community as much as we currently prioritize individuality. We'll have to decide to live together. We'll need new dreams.

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